



0062765

X

ROYAL GARDENS KEW.



Period.

1821

10392
18

6
9290
19

8154
16
December 31, 1903.

THE

JOURNAL OF HORTICULTURE

COTTAGE GARDENER,

AND

HOME FARMER.

A CHRONICLE OF COUNTRY PURSUITS AND COUNTRY LIFE.

Established



in 1848.

VOLUME XLVII. THIRD. SERIES.

JULY — DECEMBER, 1903.

LONDON:

PUBLISHED FOR THE PROPRIETOR, 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C.

LONDON:
PRINTED AT THE "JOURNAL OF HORTICULTURE" OFFICE,
12, MITRE COURT CHAMBERS, FLEET STREET, E.C.



INDEX.

A

Acacia Drummondii, buds falling, 478
 Acacias, a selection of, 196
 Achievement, a notable (Dickson's, Chester), 52
 Action, 187
 Adaptation in a Pelargonium, 514
 Agathaea coelestis, 419
 Agriculture, the study of, 206
 Akebia quinata, 417
 Allium neapolitanum, 282
 America, lack of "push" in, 296
 American Florists' Convention, 294
 American friends in England, 52
 American Society for Horticultural Science, 189
 Ampelopsis, syn. Vitis, 150
 Anemone alpina and its variety sulphurea, 531
 Anemones, Irish, 81
 Anomatheca cruenta, 242
 Antirrhinum to succeed Chrysanthemums, 485
 Aphelandra nitens, 582
 Apple—Adam's P. ammain, 540; Annie Elizabeth, 337, 442, 460, 490; Dutch Mignonne, 540; Fearn's Pippin, 540; Gascoigne's Scarlet Seedling, 444; Golden Pippin, 311; Golden Spire, 378; Lane's Prince Albert, 540; Lord Hindlip, 314; Middle Green, 462; Scarlet Nonpareil, 516; Stirling Castle, 540; Sturmer Pippin, 516; Ribston Pippin, 516; Warwickshire or Wyken, 516; White Transparent, 313; Yorkshire Greening, 541
 Apple and Pear culture, paper on, 331; crop, the, 53; imports, 494; scab, combating, 403; scale on Waltham Abbey Seedling, 365; tree, a profitable, 444; tree, remarkable, 330; trees, bad effect of grass on, 290; trees cankered, 524
 Apples—American, 99; and the recent gale, 307; British v. foreign, 481, 534; Canadian, for England, 464; crop of, a heavy, 417; colouring of, 359, 380, 400, 442, 476; new and old, 306; profitable varieties of bush, 518, 540
 Appointments — E. Bambridge, 69; —Benbow (Abbotsbury), 219; D. Bliss, 308; Jos. Booker, 99; Geo. Burrows, 375; W. A. Cook, 308; A. V. Coombe, 5; Henry Durnford, 308; W. Earp, 308; F. Fennimore, 464; H. Foster, 507; James Foster, 191; A. Garner, 507; A. Grant, 557; Geo. Gregory, 331; Mark Huntley, 72; F. Jackson, 31; W. J. King, 308; —Mabbott, 124; John MacLellan, 308; James Moir, 149; Jos. Mottram, 52; David Murray, 99; C. Nevil, 331; W. Page, 72; John Peattie, 5; W. J. Penton, 72; G. Pike, 294; Richard Roberts, 219; Ed. Rutherford, 487; John Stringer, 375; H. Sweet, 487; F. Tapper, 308; J. Turton, 487
 Apricots, brown spots on, 206
 Artindale and Sons, Sheffield, 198
 Asparagus bed, making a, 547
 Aspen, the, 588
 Association, a Gardeners', 460, 490, 536
 Aster, Coombe-Fishacre White, 371
 Aster plants destroyed in the stem, 276
 Aster puniceus pulcherrimus, 423
 Asters, beautiful new, 282
 Asters, perennial, 307
 Aubrietias, 8
 Australia, Daffodil King's tour in, 78
 Autumn thoughts, 280
 Azalea amena, 327

B

Bacteria, symbiotic, 368
 Bamboos, flowering and hardy, 167
 Banana, weight of a, 593
 Banffshire, newer varieties of fruit in, 444
 Banks, co-operative, 23
 Barr, Mr. Peter, 241; visit to Egypt, 531
 Barr and Sons, at the Royal Botanic Gardens, 5
 Bath Botanic Gardens, 357
 Bath, Garden of the Royal School, 302
 Battersea Park, 370
 Bee-keeper (bees)—Age of worker, 522; apiary, position of an, 506; autumn feeding and preparation, 252; autumn stimulation, 66; bee-keepers' lament, 89; bee-keeping, modern, 364; bees-wax, 230; care of comb honey, 89; colonies short of stores, 522; driving bees, 276; feeding, 364; finding and introducing queens, 158; hive of, without brood: is it queenless? 298; hive roofs, 429; hive, the hexagonal Stewarton, 569; hives, locality and position of, 320; hives, stray thoughts on, 66; honeydew, 89; hornet and wasp, relative size of, 591; how to commence bee-keeping late in summer or early autumn, 158; how to hive, 40; Italian, 522; marketing honey, 230; queen bees and stings, 591; removing surplus, 40; re-queening, 156; robbing, 113, 364; supers, when to put on, 67; swarming, 40; wax-moth, the, 184; weak colonies, 298; wintering, 386, 544; hive, the Stewarton, 607
 Bedding—combination, 355; in London parks, 210; Hampton Court, 210, 287; Regent's Park, 287; spring, 419; spring, in Hyde Park, London, 266
 Begonia flower, abnormal, 254; Gloire de Sceaux, 279
 Begonias, an amateur's, 348; at Rocklands, Waterford, 29; for winter, 547; Ware's tuberous-rooted, 551; winter-flowering, 435
 Belgium and the Ardennes, holidays in, 98
 Birmingham Botanic Gardens, 152; new curator at, 80
 Birmingham parks, new head gardener for, 331
 Birmingham University and plant diseases, 486
 Blackberries in Lincs, 415
 Blackberry, a "a white," 145
 Black Currants, French, 53; mite, 281
 Blairgowrie district, fruit crop in, 75
 Book dealing with compensation, 185; Book, old: value of, 160
 Book notices — Beautiful and Rare Trees and Shrubs, 219; "Botanical Names for English Readers," 265; Cambridge Botanic Garden Report, 31; Canadian Florist, 452; Century Book of Gardening, 100; Coniferae, Hand list of, 27; Decorations, book on table, 277; Farmer's Business Hand Book, 531; Fruits, Culture of Hardy Tree and Bush, 423; Gardening for All, 423; Heating by Hot Water, 524; Horticultural Journal, The, 246; Irrigation, Underground, 72; Jones' Chrysanthemum Guide, 487; Journal of the Royal Horticultural Society, 130; Manuring of Market Garden Crops, 531; Nature Study, an introduction to, 423; N.C.S. Catalogue (a critique), 535; Official Catalogue of the Nat. Chrys. Soc. of

BOOK NOTICES—continued.

France, 503; Orchid Review, 507; Orchids, their Culture and Management, 47; Packing and Selling Fruits and Vegetables, 531; Peach, Book of the, 228; Pictorial Practical Bulb Growing, 531; Principles of American Forestry, 507; Roses, Beautiful, 192; Violets and Pansies, 190; Wild Garden, the, 169; Zoology, Economic, 423
 Botanists, portraits of, 354
 Botany, a course of advanced lectures on, 353
 Botry, plan of a, 112; another, 282
 Bouvardias, choice, 419
 Brambles plentiful, 191
 Bricks, price of, 91
 Brodiaeas, 459
 Brown rot of fruit (Sclerotinia fructigena, Schröter), 51
 Brugmansias losing their lower leaves, 91
 Bulbocodium vernum, 483
 Bulbous plants, notes on, 459
 Bulb growing in Lincolnshire, 170
 Bulbs, Lincolnshire, for Holland, 52; neglected lines in hardy, 251; relative value of large v. small, 252; reminders about, 377; their culture, 245
 Bunyard's nursery, 306
 Butterfly, small copper, 296; the Comma, 386

C

Cabbage, a monster, 439
 Cabbages infested with grubs, 121
 Cabbages, large (one 9 feet in diameter), 490
 Calceolaria Burbidgei, 419; 20 feet in circumference, 305
 Calceolarias at Bolehall Manor, 26; new, 8
 Campanula garganica and its varieties, 46; persicifolia, 104; pyramidalis, 289
 Campanulas for June and July, 226
 Canada calls for Britons, 456
 Canadian exhibition, permanent, at Crystal Palace, 487
 Canning interest in New Jersey, 204
 Cantaloup, a heavy, 81
 Cardiff Botanical Gardens, 441
 Carnation League of America, 179; Mrs. Lora Armstrong, 214, 351
 Carnations, Marguerite, 407; new cert. vars., 82
 Carnations at Keevil Manor, 165; flaked and self, 79; from Milburn, 101; Malmaison, 407; market Tree varieties, 150; raising seedling, 101; winter blooming, 551; with flowering stems, 321
 Carrot crop, the, 80, 98, 127, 146
 Catalogue, a Japanese nurseryman's, 353
 Catalpa bignonioides, 242
 Catalpa wood, 547
 Cattleya Atalanta superba, 189; Dowiana Roita, 317; gigas, 71; Mendeli Bella, 436; × Pittiana, Wilson-Potter's variety, 281; Rex, 143; Schilleriana Lowi, 303; Warszewiczii v. r. Mrs. E. Ashworth, 426; Cattleya guttata Prinzi, 599
 Cauliflowers going off, 21
 Cedars, the, of Goodwood, 327
 Celery, earthing, 143; for rheumatism, 509; plants diseased, 343
 Centipedes and millipedes, 424
 Cereus grandiflora, 150
 Certif. Plts., 96

Certificated Plants, Flowers, Fruits, and Vegetables (by the Royal Horticultural and other Societies).

Apple, Middle Green, 362
 Asparagus plumosus cristata, 82
 Bean, Hackwood Success, 179
 Begonia × Bavaria, 179; × His Majesty, 406; × Marie Bouchett, 82; × Our Queen, 406
 Carnation Ivo Sebright, 84; Mrs. F. Wellesley, 84; Richness, 84; Speranza, 84
 Cattleya Atalanta superba, 189; × Fabia var. Marie du Waverin, 406; × F. W. Wigan, Peeter's var., 406; Gautheri, 406; gigas, variety White Queen, 130; Loddigesii, 268; × Pittiana Wilson-Potter's var., 220
 Chrysanthemum, Allman's Yellow, 566; Dorothy Pywell, 495; F. S. Vallis, 406; Lady Cranston, 495; maximum, King Edward, 220; Maude du Cros, 406; Miss E. Holding, 406; Mrs. J. Dunn, 495; The Champion, 220
 Cœlogyne fuscescens, 406
 Croton, Turnfordiensis, 566
 Cypripedium insigne Sanderae, Oakwood Seedling, 566; Lawrenceanum Gratrixianum, 268; × Leeaunum Clinkerberryanum, 566; × Leeaunum var. Staffordianum, 495; × Queen of Italy, 495; × Rappartianum, 268; × Ultor, 82
 Dahlia, Dainty (Cactus), 268; Darkness (single), 268; Edina (pompon), 222; F. M. Stredwick (Cactus), 263; George Gordon (Cactus), 268; H. W. Sillem (Cactus), 222; Mr. H. Brousson (Cactus), 268; Mrs. J. W. Wilkinson (Cactus), 222; Pearl (Cactus), 222; Princess of Wales (single), 268; Queen of Whites (pompon), 268; Rosebank scarlet (single), 268; San Toy (pompon), 268; Sirius (Cactus), 222; Sweet Nell (Cactus), 268
 Dendrobium amplum, 466
 Erica gracilis nivalis, 403
 Gladiolus Ellington Belle, 131; Lady Muriel Digby, 179; Nymph, 172
 Hidalgua Wercklei, 220
 Lælia Iona, Southgate variety, 179
 Lælio-cattleya × Bletchleyensis var. illuminata, 82; × Cassiope, 495; × Haroldiana var. John Bradshaw, 406; × Gottoiana Regale, 406; × Norma superba, 362
 Lilium elegans, Peter Barr, 82
 Melon, "Fiscal Problem," 362
 Nephrolepis × Mayi, 362; Pieroni, 131; Westoni, 406
 Odontoglossum crispum Marie, 566; × Harryo-crispum Ridens, 566; × Vuylstekei vivicans, 566
 Phalaenopsis × Chardwarensis, 406
 Peach, Libra, 131; Peregrine, 179
 Pteris metallica, 82
 Senecio tanguticus, 268
 Sidalcea candida, Rosy Gem, 268
 Smilax sagittifolia (aspera) 268
 Tamarix hispida aestivalis, 12
 Odesana, 179

CERTIFICATED PLANTS, &c.—*contd.*

Vitis *armata*, 247; *flexuosa* *Wilsoni*, 247; *megaphylla*, 247; *sinensis*, 247; *Thomsoni*, 217; *Wilsoni*, 217
Zygopetalum Balli *Roeblingianum*, 263
 Cinerarias dying off, 230
Clematis × *Countess of Onslow*, 170
Clematis recta, 104
Clematis, species of, at Kew, 212
 Chamberlain, Mr. Jos., M.P., and his new garden, 338
 Chambers, Sir William, 287
 Chelmsford, County Technical Laboratories, 375
 Cherry House (October notes), 351; (December notes), 586
 Chilwell Manor, Romsey, 354
 Chiswick Conference and gardeners' dinner in London, 119
 Chiswick Show, lessons from the, 316
 Chiswick, fruit show and vegetable conference at, 312; last great meeting at, 312; Christmas gifts, 571
Chrysanthemum—Brightness, 512; *Cheltoni*, 481; *leucanthemum*, semi-duplex, 164; Mrs. J. Dunn, 533; Mrs. J. P. Bryce, 463; W. Duckham, 481
Chrysanthemums—A crimson, 510; America, proceedings in the U.S.A., 132; and their names, 420; analysis Mr. Molyneux's, 695; a notable quartet, 420; at the Botanic Gardens, Liverpool, 420; at Earlwood, 238; Billingsbear Park, Wokingham, Berks, at, 512; blooms, how to judge, 420; bud selection, 190; critique controverted, 561, 578; cultural notes, 332; cuttings, 352; Dewsbury Park, York-shire, at, 463; diseases and insect pests, 160; dwarf, 67; early-flowering at Tayside, 370; English flowers in America, 513; feeding, 570; feeding planted-out stock, 191; feeding the plants, 166; four good, 332; group, of a fine, 463; hints to exhibitors, 312, 370; incurved varieties, new, 553, 580; incurving Japanese varieties, 532; Japs, bud-taking on, 166; Japs, new, 553, 580; judges, hints to, 420; leaves, browned and withered, 230; lecture on, at Peckham Town Hall, 253; Liverpool collection, a, 513; manure, the complete, 166; names, 463; N.C.S. official catalogue, 370; nitrogen, what it may do, 166; novelties in America, English, 438; novelties in single-flowered, 587; Queen Alexandra prize for cut blooms at Edinburgh, 401, 416, 413, 491; packing and transit, 190; phosphoric acid essential for, 166; plant with leaves browned, 321; propagating, 512; Royal Kew, collection at, 512; rust, 473; rust on, 580; School of Handicraft's Garden, Chertsey, 512; seasonable notes on, 51; secretaries of shows, hints to, 403; seedling, at West Hill, Byfleet, 463; show board for exhibition blooms, 408; show dates, 463; South Wales, notes from, 481; successful varieties, 512; terminal buds, securing, 332; Trinity Grove, Edinburgh, at, 481; varieties, early flowering, 166; varieties, new, 434; unsuccessful varieties, 132; Weybridge, a great exhibit of, at, 463
Cobaea scandens *variegata*, 485
 Cocoa trees in fruit, 296
 Codlin Moth, Mr. Horae and the, 52
Cologyne Dayana with 486 blooms, 189; *Lagenaria*, 552
Colebiums or Meadow Saffrons, 538; winter flowering, 558
 Colour in foliage and flowers, 330
 Colours of leaves and fruits, 417
 Columbus's Tree dying, 214
 Commissions, gardeners', 9, 28
 Competition, the Lennox Cup, 121

Competitions, co-operation in horticultural, 146
 "Composites," the family of, 352
 Conifer Conference, 73
 Conifers for window boxes, 486
 Conservatories, illustrations of, 464; winter garden, 376
 Cook, the lady, what she has to say, 123
 Cooks, 136
 Co-operation in horticultural competitions, 143
 Coping, portable Perch-t ee wall, 451
 Copings, glass, 308
 Corn at Hamilton, uncut (October 15), 353
 Correspondents, answers to, 21, 43, 67, 21, 114, 138, 140, 184, 206, 254, 276, 298, 342, 363, 386, 414, 473, 502, 524, 547, 608
 Cornell, Gladioli at, 319
Cornus brachypoda *variegata*, 147
 County Council Instruction: Horticulture (Buckinghamshire to Shropshire), 489; (Somerset to Yorkshire), 56; (Scotland, Ireland, Wales), 513
 County Council Instruction, Oxfordshire, 372
 Covent Garden Market, extensions at, 576
 Credit, 534
 Cricket ground, sheep on, 408
 Cricket, R.I.S. Committees, 73, 124
 Crocus, Scharojani, 483
 Croft, the, Burcote, Oxford, 265
 Crops, garden, and weather records, 49; the fruit, 150
 Cro-field conservatory, Warrington, 148
 Cross-breeders, a compliment to, 348; the earliest experiments of, 352
 Crotons, 142, 413; treatment of old plants, 225
Crocea saligna *major*, 513
 Crown Imperials, 238
Cryptomeria elegans, 30
 Cucumber culture for market, 163, 284
 Cucumber, eelworm in, 523
 Currants as standards, 120; cordon, and Gooseberry, 540
 Cuttings—Dressing for cutting boxes, 451
 Cycas fruits, 43
 Cyclamen culture, 281
 Cyclamens, hardy, 533; is Springtail injurious to? 430
Cypripedium × *Arthuriannum pulchellum*, 574; × *Constance*, 259; × *Godefroyae leucochilum*, 483; × *Godefroyae*'s parentage, 511; insigne at Ugbrooke Park, 459; insigne in small pots, 483; *Lawrencianum* *Gratrixianum*, 369; *leuchorodum*, 119; *niveum*, at Highbury, 247; *spectabile*, 26; *venustum* *Measuresianum*, 71
 Cyp. leaf injured, 524

D

Daffodil, experts—Anderson, Backhouse, Ellacombe, Haworth, Herbert, Leeds, Salisbury, Sweet, 241
 "Daffodil King," The, on tour, Australia, 78; Australian Nurseries, 145; California, 6; Japan, China, and the Philippine Islands, 10; Melbourne, 145; New Zealand, 192, 213; South Sea Islands, 572, 598
 Daffodil, rise of the, 302
 Daffodils, Ancient and Modern, 240; forcing homegrown, 236; naturalised, 244
 Dahlia roots, storing, 125; the, as a vegetable, 74
 Dahlias at Ottershaw, 464; Cactus, August notes on, 19; colours of Cactus, 262; good wet weather flowers, 416
 Decorating, the art of, 459
 Decorations, autumn, 359; floral, 485, 514; dinner table, simple, 514, 163; Realism in floral design, 514
 Decorators, house and Church, 348; jottings for, 286; *Phlox-nopsis*, 281; × *Venus*, 325; *Williamsianum*, 418

Dicks, Mr. S. R., 393

Dicksons, Chester, 4
 Dinner, the gardeners', in London, 314; the recent gardeners', 416; dis-appointment, a great (R. Fenn), 336
Disa racemosa, 313
 Diseases of plants—Apple scab, 261; Apricot brown spot, 206; Black mould on lily leaves, 365; Brown rot of fruit (*Fclerotinia fructigena*), 51; Celery plants, 343; Cucumber, 152; eelworm in Cucumber, 528; Gladioli, 524; Melon, 196; Parsley, 206; Peach, 195; Pea spot (*A. ohyta pisi*), 67; "Spot" in Grapes, 165; Tomato plant, 115; "Tubers" on Cucumber plants, 555
 Diseases, plant, Birmingham University and, 486
 Doe, presentation to Mr. J., 262
 Domain, Young Gardeners'—Apprenticeship of a German gardener, 386; *Browallia speciosa* *major*, 545; *Chrysanthemum* culture, 452; *Chrysanthemum* cuttings, 567; *Freesias*, 523; *Gloire de Lorraine*, 567; *Hellebores*, 523; *Lachenalias*, greenhouse, 191; *Lily of the Valley*, for forcing, 545; *Principles of Propriety*, 501, 544; *Stephanotis floribunda*, 523, as an intermediate house plant, 191; Winter Season, the, 363
 Drainage of a field, 454

E

East Burnham Park, Berks, 394
 Echoes, trans-atlantic, 482
 Economics, national, 528, 560
 Edinburgh—Botanic Garden staff, annual meeting of the, 577; *Chrysanthemum* Show, 433; horticulture at, 52; proposed international fruit and flower show, 262; seed trade (Mr. Slater's presentation), 52; seed-trade assistants' dinner, 538
 Edwardes Square, Kensington, 536
 Elderberry syrup or wine, recipe for, 292
 Electricity, cutting trees by, 576
 Elm, about the, 104; the, 348
 Emigrants' information, 73
 Empire, commercial needs of the, 535
 Employé, sad end of a nursery, 501
 Entomology—the Waberian Moth, 501
 Epacris, Heaths and Camellias, propagating, 547
Epigaea repens (May Flower, Ground Laurel, or Trailing Arbutus), 483
Eremurus, a new (E. Himrob), 212
Erica propendens, 543
 Eryngiums or Sea Hollies, 104
 Erythroniums (see Dog's-tooth Violets) 242
 Essay prize of £10, 262
 Estate changes name, an, 375; managing an, 161
 Ether treatment, the, 441
 Eucalyptus in flower, 31; treatment of a, 91
 Evergreens, the planting age of, 436; transplanting, 305
 Exhibition of British-grown fruit and vegetables, 124
 Exhibitors, notes for, 2, 74; Melons, Figs, Apples, Pears, 74

F

Farm (the home)—Agricultural essays, prizes for, 548; autumn days, these, 387; buildings, necessary repairs in, 299; buildings of the farm, general, 525; census of, 1901, the agricultural, 479; children's employment bill, 322; corn harvest, end of the, 343; dairy congress at Brussels, 322; departure, a new, 431; disappointments, 207; editor, the omniscient and courteous,

FARM—*continued.*

91; 1879, as against 1903, 255; farrowing, prolific, 388; fiscal policy, the new departure, 63; liver-rot amongst sheep, 161; land, the water-logged, 455; London dairy show, the, 383; hedges, thorn, 547; holding, small, wanted, 409; holdings, small, 344; master's eye, the, 232; midsummer outlook, 22; motor versus horse, 504; notes, 139; pigs, breeding and feeding, 593; Potato harvest, the, 278; Potatoes, manuring, 366; Potatoes, new, and the disease, 409; poultry keeping, suburban, 162; R.A.S. and Park Royal, 238; Royal Scottish Agricultural Benevolent Institution, 543; "Royal" Show, the inevitable, 43; rural districts and milk supply, 328; sheep, healthy, 300; "Something wrong in the state of Denmark," 569; villages, bad times in the, 456; wages, fifty years of agricultural, 185; Webb and Sons' stand at Birmingham, 526; Webb and Sons' stand at London Cattle Show, 518; Wheat, preparing land for, 116; Vale! 609; work on the, 22, 44, 62, 92, 116, 140, 162, 186, 207, 232, 278, 300, 322, 344, 366, 388, 410, 452, 456, 480, 504, 521, 548, 570, 591, 610, Fence on wheels, a, 244
 Fencing, average price per yard of barbed wire, 184
 Fens, crops in the, 167
 Fern, the Pierson, 371
 Ferns, a talk about, 325; British *Scelopendrium vulgare*, 536
Ficus diversifolia, 182
 Fife, fruit crop (July) in North West, 53
 Figs, earliest trees in pots, 463; succession houses, 494; trees, early forced, in pots, 402; under glass, 145, 168, 269
 Fir, the beautiful Nordmann, 486
 Floral arrangement, a, 214, 239; decorations, 310
 Flower show, in a far country, 228; support, a handy, 407; the Golden, 491
 Flower, the life of a, 607
 Flowers, hardy, at Edinburgh (Sept.) show, 295; of princes and nobles, 128; of the season, 30; the price of, 532, 533; to the Continent, sending, 557
 Forestry, at Park Royal, 576; book on, 67; cutting trees by electricity, 576; Midland Reafforesting Association, 434; Prairie transplanting, 576; principles of American, 507; the results of disafforestation, 348
 Formaldehyde as a fruit preservative, 171
 Frames and glass copings, 308; protection of, 507
Freesias, 182
Fritillarias, 238
 Front, study of a formal, 537
 Fruit-bottling—a neglected industry, 494; brown rot in, 51; among the fruit trees, 195; and vegetables: summer crops, 30; arrivals, huge, 31; crop in Blairgowrie district, 75; crops, failure of, 31, 123; foreign—enormous volume of trade, 171; failure of English, 171; famine in Cambridgeshire, 168; flavour in, 358; growers and railway rates, 149; importation of, 19; in Banffshire, newer varieties of, 444; in Blairgowrie district, 118; in Herefordshire, 53; in Hexham district, 168; in Kent, 99; jottings on Pines, 328; Loganberry, the, 328; Melon plants going off at the root, 196; nursery, a great, 306; origin of our, 144; our, where it comes from, 102; packing for export, 587; prices of, 101; room, a model, 305; Scottish, 171; show and vegetable conference at Chiswick, 112; supply, a new winter, 235; supply—crops and prices, 168; supply, the, 53;

FRUIT—continued.

supplies, onr, 282; value of very early or late, 290; West End fruiterer's—a growing trade, 494; trade, Scottish, pioneer of the, dead (James Lindsay), 53; trees, autumn pruning of, 400; trees, fungus of young, 29; trees in pots, 328; trees on dinner tables, 327; trees, phosphates for, 521; trees, protection of, 461, 535; trees, types of, 457; at Christmas, 605; forcing, 608
Fruit culture, committee of enquiry, 674
Fruit forcing, 20, 65, 90, 113, 137, 159, 183, 205, 229, 253, 275, 297, 363, 385, 407, 428, 453, 502, 523, 546, 568, 592
Fruit, hardy, 41, 89, 137, 183, 229, 319, 341, 363, 408, 453, 501, 545, 591
Fuchsia, a London, 100; microphylla, 485
Fuchsias as bedding plants, 214; hardy, 305, 359
Fuels for the garden, 357
Fugitive notes, 49
Fumigation, hydrocyanic acid gas, 482; methods of, 535
Fungi, exhibition of edible, 214; Dr. Cooke's lecture, 258, 292
Fungologist, a noted Shrewsbury, 190

G

Gadding and Gathering, 4, 76, 158, 215, 238, 285, 515, 581
Gale, the, at Cardiff, 262
Galtonia candicans, 532
Garden, Alpine, 303; A "Friendship," 282; City Association in the Highlands, 384; City Pioneer Company, Ltd., 294; City, the, 214; Gleanings, 8, 81, 104, 123, 150, 214, 242, 348, 371, 419, 485, 582; making a (plan drawing), 412, 436, 560; munificent gift of G. F. Wilson's garden to the Royal Horticultural Society, by Sir Thos. Hanbury, 149; old-fashioned, the, 27; the "New," 191; visit to a market, 112
Gardens round Sheffield, 198; some typical, the blind man's allotment, 233
Gardeners and situations, 561; and Trade Protection, 5; Association, a, 460, 490, 536 (meeting), 577, 579; dinner committee, 174; dinner, the, at the Holborn Restaurant, London, 314, 336; dinner, the recent, 396
Gardening in New Zealand, 158; Old English, to the end of the 17th century, and garden books, 33; old-time—a country garden, 94; old-time—John Parkinson's books, 263; old-time-florists, the early, 315; old-time—Tradescants and other introducers of plants, 575; window, 141
Garrya elliptica fruiting, 473
Geranium (Pelargonium) roots, storing, 385; the suburban, 577
Geraniums in boxes for garden decoration, 305
Gesnera exoniensis, 513
Gilman, Mr. E. T., 538
Gladiolus diseased, 524
Gladioli at Cornell, 300; from Langport, 216
Gleuville Gardens, Waterford, 215
Gloucestershire, orchard planting in, 577
Golden flower, the, 508
Goodwood, the Cedars of, 327
Gooseberry, wonderful, 34
Gooseberries as standards, 120; cordon and Currants, 540; unhealthy, 276; v. business, 39
Grape—Muscat Hamburg, 277; varieties of Black Hamburg, 67; Vine, essay on the, at Hull, 541
Grapes at Bath show, 218; at the Chiswick show, 442; at Pitcullen, Perth, 402; for exhibition, plan and dimensions of boxes to carry, 160; Muscat, shanking and shrivelling in the stalks, 114; notes on the

GRAPES—continued

varieties of, 378; shanking, 43; spots on, 365; spotted, 91; the merits of, 403; travelling, 491
Grass, bad effect of, on Apple trees, 290; seeds for renovating permanent pastures, 276

H

Hall, the Horticultural, Baron Schröder's appeal on behalf of the, 537
Halls, public, for floral exhibitions, 510
Hartam Park, Wilts, 488
Heating and Ventilating, lecture on, 486; book on, 524
Heaton, Mr. S., 372
Hedges for ornament, shelter, and profit, 292, 299; shelter, 285
Hedysarum multijugum, 371
Hellebores, culture of, 524
Herefordshire, fruit in, 53
Heywood and horticulture, 204
Hibiscus syriacus, 370
Hints, useful, 515
Holland House floral fête, jottings on the, 9
Hollies, a dozen select, 592
Hooker, Sir William Jackson, 291.—Norwich and Halesworth, 291, 335; II, Glasgow, 1820—1840, 349, 404, 414
Hopetoun House, new head gardener for, 331
Hop growers, 170
Horne, Mr. W., senr., 103
Horticulture and character, 308; and home industry, 411; gold medallist in, 77, 122; in Tasmania, 128; (1904), R.H.S. examinations in, 375; modern progress in, 556, 580; science, American soc. for, 189; the banner of, of, 158
Humica elegans, harmful effects of, 582
Hyacinth glasses, 275
Hyacinths, commercial culture of, 282; for baskets, 459; Roman, 150
Hybrids, peculiar, 340
Hybridists and "heredity," 302
Hybridising and crossing plants, 466
Hydrangea flowers, how to make blue, 327
Hydrocyanic acid gas fumigation, 482
Hypericums, species of, at Kew, 215
Humphreys, Mr. Thomas, 80; presentations by Chiswick confreres, 262; presentations by the R.H.S. Committee and by the Horticultural Press to, 312

I

Impney Hall, Droitwich, 288
Indiarubber plant with holes in leaves, 160
Industry, a new Irish—pasture seeds, 216
Insects as garden adornments, 71, 216, 373, 609; Codlin moth, the, 52; depositing eggs on garden fencing (Tiger moths), 161; injurious, U.S.A., 165
Ipswich gardeners' outing, 31
Ireland, C. C. Instructors in Horticulture, 560; early Potatoes from, 48, 164; fruit crop in, 239
Irish prospects, 260
Iris leaves going off, 365
Irisés, forcing Spanish, 485
Isle of Wight garden, trees and shrubs in an, 81
Ivy and evergreens, pruning, 21
Ivies, 581
Ixias, 238

J

Jacaranda mimosæfolia, 91
Japan, Peter Barr and, 50
Jam season, the, 244
Jasminum gracillimum, 435

"Journal," the uncut, 510, 536, 569
Judges at flower shows, 218; hints to Chrysanthemum, 420; under judgment, 117
Judging, point, 411, 460; point, at Shrewsbury, 218

K

Kadsura japonica, a handsome shrubby climber, 214
Kainit, superphosphate of lime and nitrate of soda for Celery, Chrysanthemums and Vines, 133
Kent fruit growers' anxiety with regard to Currant mite, 190; Gardeners' Societies, suggested amalgamation of East, 441
Kentish flower shows, 219
Kew, notes from, 581; rare Orchids at, 303; shrubs and undershrubs at, 76; species of Hypericum at, 215; the greenhouse at (September), 215; the greenhouse (December), 515, the Palm House, 439; the "undergraduates" at, 100
Kingswood (Bristol) Show, 211
Kitchen garden, 20, 66, 114, 160, 205, 253, 297, 341, 385, 523, 568, 608
Kylemore Castle, 289

L

Lælia Finckeniana, 436
Lælio cattleya Decia, L.-c. Decia alba, 433; L.-c. Norma superba, 436
Laird, Mr. and Mrs. D. P., silver wedding, 330
Land, back to the, 9, 29, 49, 77, 122
Lapageria, propagating white, 430
Latham, Mr. W. B., 219; testimonial to Mr. W. B., 283, 356
Lawn—extermination of Trefail, 100
Lawns, destroying moss and noxious weeds on, 593
Leaves, skeletonising, 231
Legal notes—Holloway's protected, 170; Ware's local rating appeal, 214; value of a Holly hedge near Newport, Mon., 577; West Wycombe Horticultural Society, 170
Lettuces at the Drill Hall, 292
Libonia floribunda, culture of, 327
Light, effect of, on plant life, 81
Lightning and trees and plants, 329
Lilacs, budded, 305
Lilium Harrisii, 242; in the flower border, 326; Martagon, and its white variety, 23; pardalinum, 23; × Mrs. T. Roosevelt (new), 459; Stephens' hybrid (new), 327; speciosum, 104
Liliaceæ, the—Agapanthus, 492; Androstaphium violacea, 492; Bessera elegans, 492; Blandfordia, 435; Brodiaea, 492; Chionodoxa, 493; Urginea, 493; Dipsadi, 492; Fritillaria, 415; Funkias, 435; Galtonia, 493; Hemerocallis, 435; Hyacinths, 493; Lachenalia, 492; Leucocyrrne, 492; Lilium, 493, 552, 585; Massoni, 492; Muscari, 493; Ornithogalum, 493; Phormium, 435; Scilla, 493; Tritomas, 435; Tulbaghias, 492; Tulipa, 585; Veltheimia, 493
Lily of the Valley, retarded, 283
Liming, 123
Liverpool Botanic Garden, 419, 508; parks' inspection, 51
Longleat, Melons at, 311
Lowfield Nurseries, festivities at, 375
Luffmann, Mr. C. Bogue (a notable Australian horticulturist), 487

M

Manchester Botanic Gardens, 52
Manetti Stock, a plea for the, 194
Manure from horses that are bedded down with sawdust, 321
Manures, phosphates for fruit trees, 521; their use and abuse, 337

Manure, farmyard: variation in the quality and character of dung, 422; conservation agents, 443; treatment of dung in the field, 494; treatment of dung in the homestead, 443; experiments with at Alfrinton, 594

Manuring, experimental, 1
Marrow jam, recipe for, 292
Masdevallias, 574
Masters, Dr. M. T., on Conifers, 483
McIndoe, retirement of Mr. James, 353, 438
Measurements, finding cubic, 592
Melon, decaying, 43; leaves rusted, 254; plant going off at the base, 195; Pres. Lou bet, 70; the new 'Fiscal Problem', 403
Melons at Longleat, 311; late, 586; rock, 184; sweating, 21; treatment of, 102
Mendelian theory, the, upheld, 340
Michauxia campanuloides, 125
Millipedes and centipedes, 424, 442
Missouri Botanical Garden, destroyed, 503; tree Ferns at the, 452
Mitraria coccinea, 419
Mole, against the, 194; a plea for the, 167
Mules, Dr., his garden at Gresford, 3
Muscats, shrivelling of, 239
Mushroom beds, outdoor, 21; giant horse, 305
Mushrooms in boxes, growing, 569

N

Names, practical help in plant naming, 508
Narcissi, classification of (P. R. Barr and F. W. Burbidge), 933; Professor Hillhouse's scheme, 234
Narcissus, Gloria Mundi, 295; Sulphur Phoenix, 237; Tazetta (Chinese Sacred Lily), 250
Natural History, Arctic, 382
Nectarine, a pot, 269
Nepenthes × picturata, 232
New Jersey, canning interest in, 201
Newton Mearns, notes from, 418
New York Parks, 124
New Zealand, horticulture in, 158
Nicotiana Sanderiana, 485
Nitrogen, soil, 93
Nomenclature, plant, Celtic element in, 146
Norfolk, in pleasant, 539
Notes and notices, 5, 31, 52, 72, 124, 146, 170, 191, 219, 244, 262, 293, 308, 330, 353, 375, 441, 456, 508, 557, 576
Notes, a wanderer's, 194
Novelties and rarities, 435
Novelties or improvements in flowers, 53
Nursery, a great fruit, 396
Nurseries, register of, 53
Nut, Duke of Edinburgh, 315
Nuts and Filberts and Mirabelles, 203

O

Oak, the scarlet, 439
Oakbrook, Sheffield, autumn flowers at, 557
Obituary—Gardiner, F. A., 156; Hedderley, J. S., 156; Housley, Wm., 219; Kitley, J. M., 375; Lindsay, James, 53; Newell, Abraham, 464; Pond, William, 73; Shand, William, 308; Smith, James, 296; Summers, G., 418; Thompson, Wm., 25
Olearias, 529
"Orchid Day," an, 352
Orchids, troubles of an, 532
Orchid League, the, 419
Orchid or Violet Day, 351
"Orchid hunt, the" (theatrical play), 353

Orchids—*Cattleya Atalanta* *superba*, 189; *C. Dowiana* *Rosita*, 347; *C. gigas*, 71; *C. Mendeli* *alba*, 436; *C. × Oweniana*, 96; *C. × Pittiana*, *Wilson-Potter's* variety, 281; *C. Rex*, 143; *C. Schilleriana* *Lowi*, 303; *Cœlogyne Dayana* with 486 blooms, 189; *Cœlogyne Lagenaria*, 552; *Cypripedium × Arthurianum pulchellum*, 574; *C. × Constance*, 259; *C. × Godefroyæ leuchochilum*, 483; *C. insigne* at Ugbrook Park, 458; *C. insigne* in small pots, 483; *C. Lawrencianum* *Gratrixianum*, 369; *C. leuchorrodum*, 119, 165; *C. niveum* at Highbury, 547; *C. spectabile*, 26; *C. venustum* *Measuresianum*, 71; *C. Warscewiczii* var. *Mrs. E. Ashworth*, 436; *Dendrobium Phalaenopsis*, 281; *D. × Venus*, 325; *D. Williamsianum*, 458; *Disa racemosa*, 213; *Lælia anceps*, 530; *L. anceps Oweniana*, 530; *Lælia Finckeniana* 436; *Lælio-Cattleya norma* *superba*, 436; *L.-c. × Decia*, 552; *Decia alba*, 436; *Masdevallias*, 574; *Odontoglossum crispum* *Ashworthianum*, 459; *O. luteo-purpureum* var. *Ashworthianum*, 436; *× Star of Heaton*, 458; *Oncidium Gardneri*, 414; *O. pumilum*, 458; *Phaius × Chapmani* *superbus*, 47; *Phaio-calanthe × Sedeniana*, 165; *Phaio-cymbidium × Chardwarensis*, 507; *Phalaenopsis amabilis* *Rimestadiana*, 369; *P. intermedia* *Portei*, 394; *P. Mariae*, 599; *Sophrontitis grandiflora*, 574; *Vanda cœrulea*, 507; *V. cristata*, 530; *V. Denisoniana*, 530; *V. Hookeriana*, 530; *V. insignis*, 507; *V. tricolor tenebrosa*, 3

Orchids—and symbiosis, 347; as fodder, 81; at Chelsea, 574; beautiful, in Aberdeen, 143; book on, 189; "Culture and Management" (book notice), 47; decorations with, 582; Harefield Hall collection, 458; hybridisation of, 318; Oak leaves from mountain ledges, 369; Otto Beyrodt's collection at Marienfelde, Berlin, 436; prices for big, 436; rare, at Kew, 303; sold for the R.H.S. Hall, 293; storing pollen, 369; travels of an Orchid hunter, 189, 212; *Vandas*, notes on, 394, 414

Orchids—week's cultural notes, the, 3, 26, 47, 96, 71, 119, 143, 165, 189, 212, 244, 259, 281, 303, 325, 347, 394, 414, 436, 458, 483, 507, 530, 552, 574, 599

Onions, Albanian, 244; mildew on, 161

Orange tree, grafting, 430

Oranges, giant colonial, 170

Orchard house trees, 306

Orchard houses: their construction, 198

Orchards, bare, 123; the protection of, 100

Orphans, help for gardeners', 511

Osteomeles anthyllidifolia, 348

Oxford County Council, Trial Allotments Compt., 319

P

Pansies, 371; and *Violas*, propagating, 96

Park, Glasgow's new, at Thornliebank, 487

Park Royal, forestry at, 576

Parks, the American, 441

Passiflora cœrulea, 57

Passion flowers, 96

Pasture seeds, 216

Pea, culinary, Alderman, 371; pickers, Kent, 53

Peas, notes on culinary, 218; wire net for, 400

Peach shoot diseased, 195

Peaches and Nectarines, falling, 21; and Nectarines falling off, 138; early outdoor, 102; large, and heavy, 285

Pear, *Bergamotte Esperen*, 587; *Marie Benoist*, 338; *Nouvelle Fulvie*, 305; *Olivier de Serres*, 305; *Passe Colmar*, 422

Pear-Apple, the, not a success, 340; trees going off, 254; trees unhealthy, 547

Pears, dessert, for wall facing east, in order of ripening, 343; for gable ends, 257; seventy-four dessert, on the Quince, 525; do. stewing, 343

Pelargonium, adaptation in a, 514

Pelargoniums, shifting young, 255; ward off snakes, 268

Pennisetum macrophyllum atro-sanguineum, 501

Pentas carnea, 371

Pentstemon *Newbury Gem*, 416

Pentstemons, 96

Perfumes, plant, 555

Peru, map of the Republic of, 5

Petunias, 96

Phaio-cymbidium × chardwarensis, 507

Phaius × Chapmani *superbus*, 47

Phalaenopsis amabilis *Rimestadiana*, 369

Philadelphuses, 97

Phillips, Mr., of Shrewsbury, 190

Phloxes, 97; hardy perennial, 104

Phosphate for fruit trees, 521

Phyllocacti, 97

Physalis peruviana edulis, 327

Picea pungens, Koster's Blue, 486

Pine culture, hints on, 494; suckers, 269; white, as a shelter tree, 529

Pines, notes on, 402

Pith moth, the (*Laverna a'ra*, Haw.) 135

Plant for barbed-wire fence, 342; names, peculiar, 440; notes, hardy, 483; the clock, 123

Plants, bulbous in greenhouses, 242; interchange of, 485; interesting wild, 28; lifting from the open ground, 259; names of 77; notes on hardy, 531; risks in gathering, 419; the value of herbaceous, 527; water and bog, 461; with possibilities, 503

Planting season, the, 324; season, the folly of cheapness, 358

Plums, Japan, 348; second crop of, 330

Poinsettias, devoid of bracts, 430

Pollen, storing, 369

Polyanthuses, 97

Poplar, the Black, 588; the popular, 582

Pope's knowledge, the (Leo XIII.) 123

Poppies, the new Iceland, 282

Potassium permanganate and water, proportions to use for spraying Carnations, 91

Potato boom, the, 374, 568, 594; challenges, 351; crop, good, 73; growing, experimental, 371; growing in W. Lothian, 538; harvesting, 401; Society, a National, 401, 416, 534

Potato, Evergood, 359; King Edward VII., 359; Northern Star, 337, 359, 374, 380; Sutton's Discovery, 371; the Crofter, 371; the Factor, 490

Potatoes diseased, 264, 510; early, from Ireland, 48, 164; large, 417, 443, 460; large yield of, 325; new varieties, their prices, 244; propagating from cuttings or shoots, 502; record price for Kent grown, 219

Poverty, 69

Practice, with science, 550

Prices (fruit) abnormal, 171

Primula frondosa, 555

Priory, the, Warwick, 468

Propagation, methods of, 127

Proverbs, gardeners', 509, 536

Publications received, 182, 228, 239, 274, 299, 408, 454, 567

Pymmes Park School of Gardening, 293

Q

Queensland, fruit growing in, 586

Question, night, 572

Quid pro Quo, 209, 246

Quinces, 123

R

Rain, effects of the, 433

Rainfall Organisation, British, 219

Ranunculus, duration of French, 138

Raphiolepis ovata, 521

Raspberry-Blackberry, cross between, 473

Raspberry culture, 328

Raspberry-Strawberry, cross between, 478

Raspberries at Blairgowrie, 353; fruiting on current year's growth, 299

Readers' views, 9, 28, 49, 77, 146, 194, 218, 239, 265, 292, 337, 358, 380, 442, 460, 490, 510, 534, 560, 578, 601

Reading College Garden, 76

Red Currant, Raby Castle, 28

Red spider, 265, 535, 560, 578

Regent's Park School of Gardening, 124

Rhododendrons, arrangement of, 52; a selection, 115; moving, 525; the Java, 435

Riverbanks broken down, 525

Roads, national, 528

Root-pruning, 279

Rosarians, amateur—Rev. C. H. Bulmer, 397; Dean of Rochester, the very Rev. the, 397; Mr. Conway Jones, 397; Mr. Edward Mawley, 377; Rev. A. Foster Melliar, 397; Mr. Herbert E. Molyneux, 398; Rev. J. H. Pemberton, 398; Rev. F. Page-Roberts, 393

Rose Analysis—1896-1903 (Mr. Mawley's) 389; exhibition Roses, an audit of the newer, 392; for general cultivation, 393; garden or decorative, Hybrid Perpetuals and Hybrid Teas, 390; Hybrid Teas, the advance of the, 391; Teas and Noisettes, 391

Rose, Banksian, 454; Corallina, 514; Crimson Rambler, treatment of, 385; Général Jacqueminot, 243; Gruss an Teplitz, 260; Liberty, 488; Maréchal Niel, 231; Morning Glow, 284; Niphetos, 488; Pink Rambler, Lady Gay, 305; Rosette de la Legion d'Honneur, 460, 490; Mme. A. Mare, 514; the Philadelphia Rambler, 381; the Green, 354; the Meteor, 349, 331; Urania (new), 465; leaves blackened and coated with white substance, 298; Rose leaves diseased, 277; Rose show dates, 77; T. and H. T., pointing out in greenhouse, 430, 440, 455, 488; Rose beds, making new, 381; American, 260, 349; America, 400, 514; and herbaceous plants, 307; attar of, 118; at Waltham Cross, 304; blooming unhealthily, 160; Briaring, 211; Briar v. Manetti, 211; climbing varieties, 284; "Dean's Collection," the, 478; dwarf varieties, 192; early v. late pruning, 4; hints on budding, 98; in pots, placing out of doors, 298; jottings and what not, 349; Manetti stock, a plea for the, 194; new single, 81; notes on, 381; notes on varieties, 174; notes on some of the newer exhibition, 424; old and new, 514; propagating by cuttings, 174; Roman love for, 126; selection of, 381; some good, 539; standard stocks for, 192; stocks for, 126, 148, 166; this summer time, 126; tree perfumery 243

Royal Horticultural Society a hint for the, 381, 417; finances of the, 416

Rubber industry, 206

S

St. Andrews, agricultural experiments at, 557

Sarmienta repens, 413

Sarracenia Stevensi, 165

Saxifraga aspera, 75

Scabiosa caucasica, its cultivation and varieties, 121

Schenia cassiniana, 8

Scholarship in horticulture, University College, Reading, 577

School garden, 170

School of gardening, a, 515; Edinburgh women's, 72; women's, Midlothian, 399

School of Haudicraft, Chertsey, 100

Science, American Society of Horticultural, 189, 516; at Wisley, 412, 442

Scientific Committee R.H.S.

Albinism in Shirley Poppies, 587

Apple trees and insects, 54

Apple tree scorched, 200

Ash-wood with grubs, 587

Asparagus diseased, 235

Begonia, bi-sexual, 425

Blackberry hybrids, 247

Bud formation, 247

Campanula lactiflora, linear-leaved, 247

Carnations failing, 106

Ceoma in *Campanula*, 295

Chimonanthus abnormal foliage, 295

Conference of New Zealand, 106

Crassula Aitoni, 425

Crocus, new, 152

Crocuses, new to cultivation, 470

Cryptococcus on Weymouth Pine, 247

Cucumber diseased, 152; proliferous, 200; scale, 200

Dracæna with aerial roots, 295

Felworms in *Agrostis*, 295

Fern spores, longevity of, 557

Figs, drying and falling, 295

Fraxinella capsules, 470

Gooseberry disease, 106

Helenium, proliferous, 247

Heuchera, floriferous, 295

Hippeastrum blistered, 247; species, 247

Hymenocallis Harrisiana, 200

Insects and Apple trees, 54; injurious centipedes, 425

Jasmine root hypertrophied, 425

Mammillaria with Dodder, 106

Orites excelsa, 200

Papaver dubium, semi-double, 106; pavoninum, 152

Parsley leaf miner, 425

Pears, malformed, 470

Pears rotting near the base, 200

Plums, late flowering, 152

Pollination in orchards, 106

Potatoes and millipedes, 470; supertuberation in, 587

Raspberry hybrids, 247

Rose leaves diseased, 248

Rubus rosæfolius, 200

Silver leaf disease in Apples and Plums, 249, 295

Spinach, failing, 425

Sweet Pea with seven flowers, 247

Verbascum leaves diseased, 106

Vine leaves discoloured, 200; leaves discoloured and blotched, 247

Viola disease, 200

Violets diseased, 557

Wineberry hybrids, 247

Wisley, scientific investigations at, 470

Scilla campanulata rosea, 248

Seacombe Recreation Ground, 43

Seed farm, a great Californian, 370

Seeds, germination of, 122; testing, 118; vitality of, 150, 327

Seine, purification of the river, 294

Servant, definition of domestic, 342

Sheffield Chrysanthemum Show, 1904, 474

Sheffield, criticism from, 460; gardens round, 158

Show boards at exhibitions, 511; the raid against, 534, 573

Show, the country, 232

Shrewsbury Floral Fête, 172

Shrubs (see also Trees)—*Cornus brachypoda variegata*, 150; evergreen, for seaside planting, 148, 167; and under-shrubs at Kew, 76; hardy, for forcing, 374

Single-handed, 395

Slaves, wanted, 58

Slugs and orange-peel, 9; and snails, protection against, 298

Smith & Co., Richard, of Worcester 285

Snaithingbrook, Sheffield, 576

Societies, a hint to mutual improvement, 359

Societies—SHOWS AND MEETINGS.

Aberdeen Chrysanthemum, 518
 Basingstoke, 133
 Bath Floral Fête, 232
 Bath Horticultural, 60
 Beckenham Gardeners', 330, 302, 476, 566
 Belfast Chrysanthemum Show, 497
 Belfast Rose, 131
 Birmingham Chrysanthemum Show, 473
 Birmingham Gardeners' Outing, 73, 427, 476, 487, 590
 Birmingham Root and Cattle Show, 515
 Bishop's Waltham, 131
 Bolton Chrysanthemum, 500
 Boston, Lincolnshire, 131
 Bradford Chrysanthemum Show, 474
 Brentwood Horticultural, 108
 Brighton and Sussex Summer Show, 292
 Bristol Gardeners', 135, 225, 427; Chrysanthemum Show, 497, 558
 British Pteridological, 155
 Canterbury Rose, 36
 Cardiff Gardeners', 249, 362, 487, 566, 589
 Cardiff Horticultural, 106; summer outing, 132, 427; Chrysanthemum Show, 449, 500
 Chard, Somerset, 201
 Chelmsford Chrysanthemum, 496
 Cheltenham Chrysanthemum, 470
 Chester Paxton Chrysanthemum Show, 500, 567
 Chippenham Summer Show, 179
 Co-operative Flower Show, Crystal Palace, 65
 Croydon Horticultural, summer show, 56, 418
 Croydon Mutual Improvement, 250, 294, 353, 425, 533, 577
 Dartmouth Show, 441
 Devizes Chrysanthemum, 470
 Devon and Exeter Gardeners', annual outing, 64; summer show, 201; Chrysanthemum Show, 451, 558
 Diss Rose, 54
 Dublin Field Naturalists' Club, 461
 Dublin Seed and Nurserymen's Employés Association, 589
 Dudley, Worcestershire, 133
 Dumfries-shire and Galloway Chrysanthemum, 497
 Dumfries-shire and Galloway Horticultural Show, 225
 Dundee Chrysanthemum, 513
 Dundee Horticultural, 223
 Eaglesfield, Dumfries-shire, 249
 Ealing Horticultural, 58
 East Anglian Horticultural Club, 64
 East-Kent Gardeners', suggested amalgamation, 441
 Edinburgh Autumn Show, 250
 Edinburgh Chrysanthemum, 498
 Formby Horticultural, 88
 Frome, 152; Chrysanthemum Show, 473
 Gardeners' Royal Benevolent Institution, annual festival dinner, 6; help for the (Chertsey), 306
 Guildford Chrysanthemum Show, 508
 Halberton, Devon, 155
 Handsworth Horticultural, 111
 Hanley Horticultural, 34
 Harborne Gooseberry Show, 131
 Harrow Horticultural, 38
 Hereford and West of England Rose, 53
 Highgate Chrysanthemum, 450
 Highgate Horticultural, annual show, 88
 Horticultural Club, annual outing (Windsor), 80, 353, 47, 590
 Hull Chrysanthemum Show, 517
 Hull Horticultural, 541
 Huyton and Roby, 119
 Ipswich Horticultural, summer show, 57; autumn show, 470
 Ipswich Mutual Improvement, 2, 9, 330, 566, 590

SOCIETIES, &c.—continued

Irish Gardeners', 483
 Isle of Wight Horticultural Association, Sweet Pea show, 171, 590
 Isle of Wight Rose, 19; Chrysanthemum, 452
 Kilmarnock Show, 274
 Leamington, Warwick, and District, 499
 Leeds Paxton Chrysanthemum Show, 474
 Leicester, 134
 Leith (N.B.) Show, 180
 Lincolnshire Gardeners' Outing, 156
 Liverpool Amateur Gardeners', 64
 Liverpool Horticultural, 333; Chrysanthemum Show, 471, 476, 563
 London Dahlia Union, 273
 Malton, Yorks, 15
 Malton (Yorks) Floral and Horticultural, 418
 Manchester Chrysanthemum, 499
 Manchester Summer Show, 62
 Metropolitan Public Gardens' Association, 39, 64, 620, 567
 Midland Carnation and Picotee Show, 154
 Midland Reafforesting Association, 434
 Moffat, N.B., autumn show, 274
 National Carnation and Picotee, London show, 8, 106; (Northern division), 181
 National Chrysanthemum, annual dinner, 518; autumn show at Crystal Palace, 333; Executive Committee, 318, 396, 512; Floral Committee, 309, 423, 487, 542; November show, 444; December show, 541
 National Dahlia, annual general meeting, 564; show in Drill Hall, 220; Manchester show, 272; and R.H.S. and Crystal Palace Company, 534; pointers for the, 292
 National Potato (proposed), 401, 416, 534, 557; meeting and formation of, 606
 National Rose, annual general meeting, 563; at Glasgow, 85; date of the Metropolitan exhibition (controversial), 249; Temple show, 16
 National Sweet Pea, annual show, 63; annual meeting, 512
 Newcastle Horticultural, 107
 Newport, Mon., 427, 500, 559
 North Middlesex Dahlia, 272
 Norwich Rose, 37
 Nottingham and Notts Chrysanthemum, 309; show, 496
 Notts Horticultural and Botanical, summer exhibition, 72
 Oxfordshire C.C. Horticultural Students' Association, 23
 Paignton (Devon) Gardeners', 406
 Parkstone (Dorset) Chrysanthemum, 472
 Plymouth Chrysanthemum, 419
 Port Isaac, Cornwall, 155
 Portsmouth Summer Show, 36
 Prescott Dahlia, 294
 Prescott Summer Show, 132
 Reading and District, 36, 294, 418, 521
 Reading Chrysanthemum Show, 473
 Richmond Horticultural, 35
 Rock Ferry Summer Show, 181
 Royal Botanic, 423
 Royal Caledonian Horticultural, autumn show, 270
 Royal Gardeners' Orphan Fund, £25 for the, 52
 Royal Horticultural, Chiswick Vegetable Conference and Fruit Exhibition, 315, 339; Drill Hall meetings, 32, 32, 130, 178, 220, 263, 360, 405, 448, 495, 565; gift of a new garden (Wisley), by Sir Thos. Hanbury, 149; Holland Park Show, 12; Scientific Committee, 54, 200, 247, 295, 425, 470, 517, 587
 Royal Horticultural of Ireland Shows, 64, 452

SOCIETIES, &c.—continued.

Royal Horticultural of Perthshire, 262
 Royal Meteorological, 441, 520
 Royal Scottish Arboricultural, 156
 St. Ives, 133
 St. Stephens-in-Bramwell, Cornwall, 155
 Saltley, near Birmingham, 200
 Sandy, Beds, 224
 Scottish Horticultural Association, 65, 156, 219, 362, 441, 520
 Sheffield Chrysanthemum Show, 475
 Sheffield Floral and Horticultural, 64, 152, 566, 588
 Shirley (Southampton) Gardeners' Outing, 73; 225, 500
 Shirley (Southampton), Millbrook and Freemantle, 200
 Shropshire Horticultural Floral Fête, 172; statistics of the show for 27 years, 274
 Small Holdings Association, 418
 Southampton Horticultural, 59; Chrysanthemum Show, 448
 Southern Counties' Carnation, 110
 South Shields and Northern Counties Chrysanthemum, 519
 Sparkhill and District, 182
 Sparkhill Chrysanthemum Show, 496
 Sutton Coldfield Chrysanthemum Show, 457
 Sutton Rose, 38
 Tavistock Summer Show, 179
 Taunton Summer Show, 179
 Trowbridge Summer Show, 200
 Ulverston Rose, 62
 United Horticultural Benefit and Provident, 52, 149, 353; anniversary dinner, 405; 427, 441, 557
 Upton, Cheshire, 154
 Wargrave Chrysanthemum, 520
 West Derby, 134
 West Hartlepool, 475
 Weybridge Chrysanthemum, 451
 Winchester Chrysanthemum, 471
 Windsor and Eton, 37, 451
 Wolverhampton Floral Fête, 55
 Woodbridge Rose and Horticultural, 61
 Woolton Gardeners', 464
 York Chrysanthemum Show, 497
 York Dahlia, 272
 Yorkshire Gala, 10
 Soil, improving the, 582
 Solanums, berried, 485
 Solomon's Seal, 265
 Sophronitis grandiflora, 574
 South Africa, gardens in, 73; tree planting in, 100
 South American cotton, 123
 Southampton's summer show; illustrations from, 75
 Spartium junceum, hardness of, 184
 Sphinx, an arboreal, 123
 Spirea Thunbergi, 337, 380
 Spruce, a giant, 161
 Squirrels, poisoning, 161
 Statistics, national, 274
 Stings, wasp and bee, 262
 Stocks for Roses, 123, 148; winter-flowering, 423
 St. Louis fair—pomology at, 462
 Strawberry cultivation, 31; fiend, a new, 8; plants at Cork, 48; plants, barren, and their runners, 21
 Strawberries and Peas, wire-net for, 430; autumnal, 381; in Cornwall, 402; for forcing throwing-up flowering trusses, 408; in October, 350; in pots, 48, 269, 462, 586; produce small fruit, 91; second crop of, 330; the care of runners and making new beds, 74
 Streptocarpus seedling treatment, 454
 Sub-irrigation, 490
 Sundriesmen's tent at Chiswick, 170
 Superphosphate of lime, 43
 Sweet Pea fungoid, 67; "spot," 157
 Switzerland, the largest tree in, 308
 Sydenham, Mr. Robert, 73; in South Africa, 244; presentation to, 538

Symonds gold medal in meteorology (Hofrath Dr. Julius Hann, Vienna) 396
 "Sympathy" in plants, 283

T

Tanks, underground rainwater, 193
 Tan (speut), as manure, 255
 Tapton Court, Chesterfield, 26
 Tasmania, horticulture in, 128
 Tate, gift by Sir W. H., Bart., 124
 Teachers, school, and horticulture, 353
 Teaching, commendable method of, 600
 Tecoma Smithii, 342
 Tennis-court, 230; ash, 342
 Thingwall Hall, Liverpool, the future of, 375
 Tigridias, 244
 Tilia (Lime), caterpillar on, 43
 Timber growing on a commercial scale, 478
 Todd, honour to Mr. Matthew, 441
 Tomato plant diseased, 115
 Tomatoes decayed, 139; diseased, 146; in a bar, 235; not swelling, 138; winter, 516; productive, 605
 Trade notes—"Bakers," of Codsall, 299; Barr and Sons' bulbs, 185, 229; Bull and Sons, W., 431; Chase's Beetle Poison, 385; Clibran's new grounds, 250; Cooper, Taber and Co., 591; Dicksons', Chester, 229; Dobbie and Co.'s new nursery in Essex, 50; F. C. Edwards, 138; ladderman's belt, 544; Leek show at Kelso, N.B., 478; paint, imperishable horticultural, 42; Aut. Roozen and Son, 299; Roses, the "Dean's collection," 478; John Russell, Brentwood, 478; Sutton's bulb catalogue, 185; timber growing on a commercial scale, 478; Vaporite, 335; Thos. S. Ware, Ltd., London depôt, 250; Henry West, Bristol, 385
 Trans-Atlantic echoes, 482
 Transvaal, the grassy, 582; tree planting in the, 160
 Travellers, indictment against horticultural, 490, 510, 561
 Tree planting in the Transvaal, 160; planting scheme, a wise, 464; the largest in Switzerland, 308; within a tree, 340
 Trees and shrubs, 439, 529; a wonderland of, 93; in an Isle of Wight garden, 81; ornamental, 397; ornamental fruited kinds, 430; Poplar and Aspen, the, 588
 Trees, doctoring, 170; 4,000 for nine novels, 177; hardy Coniferous, 486; law with regard to cutting, 43; Oak, the scarlet, 439; of the Bible, 492, 522; old, preservation of, 308; rare and curious, 308; the storms and the, 325; town, six of the best street and town, 593; transplanting at Stancliffe, 411; transplanting large, 226, 292
 Trenching and its advantages, 362
 Tricker, Wm., New Jersey, 191
 Tritoma uvaria, 232
 Tropaeolum pentaphyllum, what treatment? 358
 Tubeholders, Handy-clip, 201
 Tubers for shrubs, 112
 Tulipa, the genus, 581
 Tulips, a spray of double, 237
 Tulip Tree, cutting off the top of a, 231
 Turnip seed, the reproductive power of, 364
 Turnips, a new disease of, 282

U

Unemployed, farm colonies for London's, 557

V

Vanda caerulea, 507; cristata, 530
 Denisoniana, 530; Hookeriana, 530; in-ignis, 507

Vandas, notes on, 391, 599
Vegetable Conference (and fruit show) at Chiswick, 312; growing, book on, 478; growing on a large scale for market, 343
Vegetable Marrow, monster, 340
Vegetables, "Supply of, for a private family," 312; Mr. Beckett on "Exhibition Vegetables," 313 Mr. Lobjoit on "the Marketing of Vegetables," 313
Vegetables: Carrot failures, 81, 98; early summer crops, 29; origin of, 70; thoughts and things about, 378
Veitchian cup, the, 99
Veronica spicata, 10; virginica, 555
Veronics, 529
Viburnum Sieboldianum, 104
Vine borders, dressing, 277; borders, renovating, 351, 378; leaf spotted, 321; rods, depressing, 535; roots from a Black Hamburgh, 592

Vines, forced, pot, 583; for planting and fruiting, 602; grafting, 547; inarching: a quory, 218, 239; in pots, 351; not ripening wood, 365; pot, at Cardiff Castle, 8; root of, decayed, 430; winter dressing for, 342
Viola hybridisation, 356
Violas and Pansies, 78; as rock plants, 242: best 13 varieties, 242; the modest, 356; the newer, 353
Violet, Lady Clifford, 461; La France, 554; Princess of Wales, 554
Visiting, garden, 45
Vitis Thomsoni, 261

W

Wake Up, England, 490
Wallflowers, 183
Wash for Gooseberry bushes, 265
Water and bog plants, 461
Water Hyacinth, the, in American waters, 282

Weather, Roses, and bees at Newton Mearns, N.B., 479
Weather, the Belvoir, 31, 149, 308, 331, 479, 546; Chiswick, 20, 43, 67, 90, 133, 159, 205, 231, 235, 277, 298, 340, 364, 385, 429, 479, 503, 524, 543, 568, 591; crops, and the, 124; cyclone in Berks, 428; Devonshire (Nov.), 479; Hamilton district, 5, 250, 308, 503; Newton Mearns, N.B., 262, 418, 546; October at Hamilton, 428; Perthshire, 524, 568; records and garden crops, 49; Sussex, 5, 149, 250, 331, 429, 546; Temple House Gardens, Great Marlow, 31, 124, 250, 331, 429, 524; wet, the continued, 387
Weeds on gravel walks, destroying, 547
Wem, Henry Eckford's nursery at, 238
Window gardening, 141
Windmill, the, 466
Winter Aconite, the, 242
Winter-garden structures, 346

Wire net for Peas and Strawberries, 460
Wisley, proposed horticultural college at, 464; the R.H.S. new garden, gift by Sir Thos. Hanbury, 149
Wistaria, dying, 139
Women and horticulture, 487
Wood, average price per foot of Oak, Birch, Chestnut, Larch, and Scots Pine, 184
Woodhall, Hilgay, Norfolk, 539
Work for the week, 19, 41, 65, 89, 159, 205, 229, 253, 275, 297, 319, 341, 385, 523, 545, 568, 591, 608
World's Fair at St. Louis, 370
Wye, South Eastern Agricultural College, 331

Y

Year, lessons of the, 549
Yew, shoots of, discoloured, 420; tree, planting, 569
York Gala, 1904, 149
Yule-tide flowers, 603

ILLUSTRATIONS.

Acacias—A. armata, A. cordata, A. Drummondii, A. pulchella, A. verticillata, 197
Apple, Gascoigne's Scarlet, 445; Golden Pippin, 311; Golden Spire, 379; Lord Hindlip, 314; Middle Green, 462; Ribston Pippin, 517; White Transparent, 313; Yorkshire Greening, 541

Birmingham Botanic Garden, 151
Bothy for six men, 109; two-storeyed, the fourth and last of the Journal plans, 383
Bulbs in the greenhouse, 243; large v. small, 23

Campanula spicata, 267
Carnation, Mrs. Lora Armstrong, 351
Carnations, diagrams illustrating cross-pollination, 101; flaked and self, 79
Cattleya × Atalanta superba, 189; × Dowiana Rosita, 347; × Oweniana, 97; × Pittiana, Wilson Potter's var., 281; × Rex, 143; Schilleriana Lowi, 303; C. guttata Prinzi, 599
Chrysanthemum—Australie, 333; Mme. Carnot, 333; Mme. G. Henry, 333; Mrs. Barkley, 333; Mrs. W. Mease, 421
Chrysanthemums—a Tasmanian show, 125; cottagers' twelve, a, 493; dozen Japanese-incurred, 493; six "Japs" from Isle of Wight, 493
Chilworth Manor, Romsey—(three views), 354, 355; Peaches as grown at, 357
Clematis × Countess of Onslow, 169
Colchicum autumnale and variegatum, 559
Conservatory (see also winter garden) at Smedley's Hydropathic, Matlock, 373; at Farmleigh, exterior, 468; interior, 469; at Philiphaugh, exterior, 466; interior, 467
Coping, a portable Peach tree wall, 454
Cornus brachypoda variegata, 147
Crowea saligna major, 513
Cyclamens, hardy, 533

Cypripedium × Arthurianum pulchellum, 575; × Constance, 259; × Godefroyae leuchochilum, 483; Lawrencianum Gratrixianum, 369; × leucorhodium, 119; spectabile, 27; venustum Measuresianum, 71
Daffodils (see also Narcissus) naturalised, 245
Dendrobium × Venus, 325
Di-a racemosa, 213

Elm, the (Ulmus campestris) 339
Erica propendens, 543

Floral arrangement, a, 221
Flower support, a handy, 407
Frames and wall shelters, 309
Fritillaria Meleagris, 238
Front, study of a formal, 537
Fruit, a Tasmanian show, 129; Brown-rot of (Sclerotinia fructigena), 51; store, Veitch's at Langley, 316; trees, a fungus disease of (Eutypella prunastri), 41

Gardeners' Dinner Committee, 175
Gooseberry, Wonderful, 34

Hedges, sheltering Yew, and grass walk, 285
Hive, V-shaped entrance to, 354
Houses, orchard, span and lean-to, 198, 199
Hyacinth glasses, 275
Hyacinths, commercial culture of, 286; in Hyde Park, 273

Impney Hall, Droitwich, the indoor fernery, 28
Insects, butterfly, small copper, 296; butterfly, the comma, 386; moth, the Pith (Laverna atra), 136; moth, the Waberian (Tortrix Waberiana), 501
Ixias, a spray, 247

Kew, the Palm House at, 439
Kingswood Show (Bristol)—best six Peaches, 215; epergues, the, 217; first prize fruit collection, 215; flower bunches, best six, 217; flower bunches, second prize, 217

Laelia anceps Oweniana, 531
Laelio-cattleya × Decia, 553; × Norma superba, 437
Lilium Martagon and its white variety, 33; speciosum varieties, 105
Loganberry, the, 329

Millipedes and centipedes, 424

Narcissus, Englehearti section, an example, 235; Hybrid Chalice-cup or Star, 325; Poet's Narcissus or small-crown, 235; Trumpet, or Daffodil, 235
Narcissus — incomparabilis Gloria Mundi, 295; Johnstoni, Queen of Spain, 235; Polyanthus, Her Majesty, 251; sulphur Phoenix, 237
Nectarine, a pot, 269
Nut, Duke of Edinburgh, 315

Oncidium Gardneri, 415; pumilum, 459

Passiflora carulea, 57
Pear, Bergamotte Esperen, 587; Beurre Bosc, 563; Marie Benoist, 338; Nouvelle Fulvie, 310; Olivier de Serres, 307; Passe Colmar, 427
Pear—cordon, 319; pyramid on Quince, 319
Pelargonium, double-flowered reverting to single form, 515
Phaio-calanthe × Sedeniana, 165
Phaio-cymbidium × Chardwarensen, 507
Phaius × Chapmani superbus, 47
Phalaenopsis intermedia Portci, 395; P. Mariae, 599
Picea nobilis of 40ft height, removing, 527
Plum trees, one of Bunyard's pot, 317
Poplar, the black, 589
Portraits—Barr, Peter, 241; Buimer (Rev.) C. H., 399; Chambers, Sir William, 287; Dean of Rochester (the Very Rev.), 399; Foster-Melliar (Rev.) A., 399; Heaton, S., 372; Humphreys, Thos., 80; Jones, Conway, 398; Mawley, Ed., 399; McIndoe, James, 438; Molyneux, H., 398; Page-Roberts (Rev.) F., 398; Pemberton (Rev.) J. H., 399; Shea, C. E., 518

Raphiolepis ovata, 521
Red Currant, Raby Castle, 37
Rhododendrons, arrangement of, 61
Rose, Niphetos, 489
Roses, Tea-scented, 11

Sarmienta repens, 413
Sarracenia × Stevensi, 155
Scilla campanulata rosea, 248
Schoenia cassiniana, 7
Southampton show—Peed's Gloxinias, 75; Roses, 18 distinct, 83; Roses, 6 distinct, 83; Roses, 9 distinct, 85; Roses, 12 distinct, 85; vegetables, 1st prize collection of, 87
Sparaxis, 249
Spirea Thunbergi, 337
Strawberries, a bed of St. Joseph, Sept. 25, 403; in October—Rev. Foster-Melliar's arrangement in planting, 350
Sweet Pea plant affected with pea spot (Ascochyta pisi), 157

Tasmania, show of Chrysanthemums, 125; show of fruit, 159
Tomato, Lister's Prolific, 605
Tree-ties, Beckett's, 476
Tree moving machine, 226
Trees, collar for lifting, 228; removing a Picea nobilis of 40ft. height, 227; transplanting at Stancliffe, 491
Tritoma uvaria, 263
Truffle, the white, 291
Tube-holders, "Handy-clip," 204
Tubs for shrubs, 112, 113
Tulips, a spray of double, 236

Vanda tricolor tenebrosa, 3
Veronica spicata, 15
Violet La France, in a pot, 553
Vitis Thomsoni, 261

Wall shelters and frames, 309
Winter garden at Moulton Paddocks, Newmarket, 360; interior view of same, 377; in the Public Park, Wolverhampton, 361; interior view of same, 376

Yule-tide flowers, 603

BEDDING BEGONIAS

SPECIAL LOW PRICES. ALL OUR OWN RAISED.

SINGLE MIXED , started ..	20/- per 100
.. to colour .. in pots ..	25/- per 100
.. .. in pots ..	30/- per 100
DOUBLE MIXED , started ..	35/- per 100
.. .. in p ..	20/- per 100
.. to colour .. in pots ..	25/- per 100
.. .. in pots ..	35/- per 100
.. .. in pots ..	40/- per 100

CATALOGUE ON APPLICATION.

JOHN PEED & SON, WEST NORWOOD, LONDON, S.E.

BY SPECIAL APPOINTMENT

**ORCHIDS—ORCHIDS**

QUANTITY IMMENSE.

Inspection of our Range of Houses IS CORDIALLY INVITED BY

HUGH LOW & CO., BUSH HILL PARK, MIDDLESEX.**ISLAND OF GUERNSEY.**

BEFORE PLACING YOUR ORDERS FOR

BULBS,

ASK FOR

W. MAUGER & SONS'
Wholesale Catalogue.

We have made a speciality of Bulbs for over thirty years, and we claim to supply roots second to none. Our business is carried on under the direct supervision of the three members of the firm, and Customers can rely on being well served.

BEGONIAS.

The best test of quality is "Repeat Orders." These we have had from many customers for the last twelve to eighteen years in many cases annually. 50 Gold and Silver Medals, including the R.H.S. Gold Medal for Begonias only. Our Speciality Collection: Double, 30/- per dozen; Single, 24/- per dozen; named or hybrid Seedlings. Descriptive Catalogue free.

B. R. DAVIS & SONS, Begonia Specialists, Yeovil, Som.

CLIBRANS**GREENHOUSE PLANTS**

From our Extensive Stock of this class of Plants we select the following as being of special merit and of tested excellence:—

Araucaria excelsa , fine big plants ..	2/6 to 7/6
Chorozema cordata splendens ..	1/6 to 3/6
and Lowi ..	4/-
Coleus , twelve choice varieties ..	4/-
Calla Elliottiana , foliage mottled white, spathe rich golden yellow, strong plants to bloom ..	10/6 & 15/-
Calla Pentlandii , rich dark-green foliage spathe rich yellow, large strong plants ..	10/6 & 15/-
Calla Taylorii , a grand hybrid of our own raising, spathe primrose yellow, a good grower ..	10/6 & 21/-
Cupressus funebris , a grand Conifer for indoor work and pot culture ..	1/6 to 3/6
Daphne indica rubra and alba ..	1/6 to 3/6
Dimorphotheca Ecklonii , a pretty and remarkably free flowering Composite ..	1/- & 1/6
Eurya latifolia fol. var. , grand plants ..	1/6 to 5/-
Hidalgoa Wercklei , strong plants ..	1/6 & 2/6
Kalanchoe flammea , strong plants ..	1/6 & 2/6
Pimelea decussata , rosy red flowers ..	1/6 & 2/6
Sollya Drummondii , bell-shaped flowers of a lovely sky-blue colour ..	1/6 & 2/6
Statice , choice varieties ..	2/6 to 15/-
Swainsonia galegifolia alba , a lovely plant with a profusion of pure white Pea-shaped flowers ..	1/6 & 2/6
Tremandra verticillata , bell-shaped flowers of a delightful violet-blue, very light, elegant, and free-blooming ..	2/6 & 3/6

EVERY VARIETY OF PLANT

Is in our Catalogue. Send for it!

ALTRINCHAM & MANCHESTER**ORCHIDS.**

CLEAN HEALTHY PLANTS AT LOW PRICES.

Always worth a visit of inspection. Kindly send for Catalogue.

NEW LIST NOW READY.

JAMES CYPHER,

Exotic Nurseries, CHELTENHAM.

**Journal of Horticulture.**

THURSDAY, JULY 2, 1903.

Experimental Manuring.

SURELY, if slowly, our knowledge of manures, their properties with the best means of application, grows wider, and some at least of the old-fashioned prejudices in favour of the contents of the dung-cart, and that alone, is gradually disappearing. Owing to its mechanical action upon soil and power of retaining moisture during periods of drought, it is not to be expected that farmyard manure will ever wholly disappear from cultivated land. Nor do our most advanced scientific teachers propose that it should; rather do they advocate—and the results of their experiments in most instances prove its advisability—a combination of dung in reduced quantities against the heavy dressings now so frequently given in gardens, and artificial fertilisers in proper degrees of strength.

In the latest issue of the Royal Horticultural Society's Journal nowhere could be found more striking illustrations, both in printed matter and pictorially, of the increased power of yield given to the soil by carrying out such a policy as is above indicated. I allude, of course, to the report of Dr. Bernard Dyer, entitled "The Manuring of Market-Garden Crops." Most interesting in this are the tables given, showing the cost of manuring with farmyard dung alone, both heavy and light applications, and combinations of this with phosphatic, potassic and nitrogenous commodities in their artificial forms. The comparisons of expenditure alone should prove of great educational value to those who will carefully peruse them, showing as they do in favour of more modern methods to a startling degree against the cumbrous and expensive 50 loads to the acre.

One of the most striking results obtained in the whole of the experiments is the value of potash in the culture of root-crops, Parsnips,

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

West's POWDERED Weed Killer.

Do not send any money, but a P.C. for a **FREE SAMPLE.**

Before wasting money on worthless imitations, test a

FREE SAMPLE,

and yourself decide on its merits. It will cost you nothing, and prove to you that

Do not send any money, but a P.C. for a **FREE SAMPLE.**

WEST'S PATENT GARDEN SUNDRIES

Plants protect
Money Save,
AND
Labour Ease.

CATALOGUE, containing 50 large pages, with 100 Illustrations, with Hints on Horticulture, post free. No Trade Terms possible off these low prices.

Buy from the Manufacturer of all Horticultural Sundries—

C. E. WEST, ROUNDHAY,

OR DIRECT FROM THE WORKS,

HIGHAM HILL,

NO AGENTS.

(SUFFICIENT ADDRESSES).

LONDON N.E.

Carrots, Beet, and Onions all deriving great benefit from the application of this item, given either in the form of kainit or sulphate of potash, in addition to the other fertilisers. In this connection it may be noted the detrimental effect of this manure upon Strawberries. Proof is given of an appreciable loss in weight on each occasion of its application. With this crop note should be taken of the decided gain in earliness by the use of the artificial manures.

The question of quality in the products has received due attention, but here the gardener must proceed with caution. Many of his crops must in an all the year round supply have lasting properties, and the use of nitrate of soda in large doses for Broccoli, Celery, spring Cabbage, or similar crops which pass through the winter for use during that period and in spring ought not by stimulants of a forcing nature to be rendered soft and tender and altogether free from vascular tissue, otherwise their chances of surviving continued hard weather are remote. Experiments of my own have proved this over a term of years to the satisfaction of myself and interested friends. Noteworthy, too, are the data obtained from the experiments carried out with leguminous plants. Lucerne is outside the scope of private gardening, but the heavy gains from the use of nitrate of soda in addition to the potash and phosphates should give careful readers food for thought. The gain with Dwarf French Beans is shown to have been equally substantial, but no practical results followed its use upon Green Peas except in distinctly better quality of produce.

These are but a few of the many crops upon which experiments have been tried. The report proves conclusively what is becoming more widely known every year—that artificial or supplementary fertilisers, though they cannot possibly displace farmyard manure, they may, when used with discretion, aid the market grower and farmer in reducing in great measure heavy cartage and railway charges, and add inestimably to the fertility of the land.

The trials of the varying quantities and combinations of manures have been carried out on what was, when taken in hand by Dr. Dyer and his eminent colleague, Mr. Shrivell, ideal land for the purpose, being poor and incapable of producing a remunerative return in any way. I should like to see the report placed within the reach of every market grower and every young gardener—yes, and many older ones, too—in the kingdom. No higher praise than that could be given.—PROVINCIAL.

Notes for Exhibitors.

The dull, sunless skies and deluge of rain recently experienced must have caused great anxiety to exhibitors of garden produce generally, because such climatic conditions render the task of "timing" the exhibits an extremely difficult one, especially in the case of those intended for early shows. Under favourable conditions in regard to weather it is by no means an easy matter to get either fruits or vegetables in the best condition early in the season, and during unfavourable seasons the difficulties are greatly intensified. Nothing in the way of cultural attention can wholly make up for lack of sunshine; still, much can be done to help crops forward at critical times, and no ambitious exhibitor can afford to neglect such necessary attention. The following notes will, I trust, be of service to many, if only as reminders.

PEACHES AND NECTARINES.—The full exposure of the fruits to sunshine and air at an early stage is a matter not likely to be neglected, because obvious to all. All cultivators, however, do not take the greatest possible advantage of sunshine when it does occur, in those instances in which it is necessary to push the fruits on as quickly as possible. While the last swelling is taking place, much can be done to hasten maturity by closing the house at 2 p.m. and syringing the trees and walls of the house heavily. During dull days and every night a little heat should be kept in the hot-water pipes, and the time-honoured "chink" of air left on the top of the house. The syringing of the foliage can safely be continued till the fruits show signs of becoming soft, and they are often perfectly coloured before that stage is reached. Just before colouring commences the soil of the borders should be thoroughly examined, and if sufficiently

dry, liquid manure and some chemical fertiliser given. There are many excellent manures suitable for the purpose advertised in the *Journal of Horticulture*. Where liquid manure is not easily obtained an excellent stimulant may be made by dissolving 1oz of nitrate of potash and a similar quantity of phosphate of potash in one gallon of water. This liquid will also help to give the fruits high colour. When there is no need to hurry the above crops the houses in which they are grown should never be entirely closed, but the air gradually reduced during the afternoon. Under this treatment the fruits are not usually quite so large as under the early closing system, but they are firmer in texture and often more highly coloured. Lord Napier Nectarine will not bear syringing so late as other varieties. If the fruits are so treated after colouring commences, they will often become brown and spotted on the surface.

GRAPES.—Both black and white kinds can be brought on quickly after colouring commences by greatly reducing the air early in the afternoon of sunny days. I always consider it an advantage to grow them in houses with a south-east aspect, because the ventilators can then be closed entirely fairly early on bright afternoons without danger to either the foliage or the berries. A little air should, of course, be again admitted early in the evening. A common mistake made with Vines of all descriptions is to increase the amount of air given too suddenly after colouring commences. It is only when the berries are almost ripe that very abundant ventilation is either necessary or desirable, except when very hot weather prevails. In the case of black Grapes damping the floors, borders, and walls should be continued until the Grapes are almost ripe. Atmospheric moisture must then be gradually lessened. More black Grapes are prevented from colouring perfectly by maintaining too dry an atmosphere than by the opposite conditions. Madresfield Court is, however, an exception in this respect on account of its liability to crack. When it is necessary to hurry this fine variety, a good deal can be done by gradually tying back the foliage and exposing the berries to full sunshine. Under this treatment they take on a dense black colour and fine bloom quite up to the base of the footstalks. Immediately the colouring is completed the leaves should be returned to their original position, or the objectionable red tinge will soon be visible at the base of the berries.

All white Grapes intended for early shows should, as soon as the colouring stage has been reached, be gradually exposed to full sunshine by tying back the foliage, and a black board fastened at the back of special bunches will do something to attract the sun's rays. Those which have plenty of time to ripen should not have this full exposure, because if the shoots are trained thinly the leaves over the bunches will only provide a very thin shade, and the rays of sunshine will reach the berries between the leaves and cause them to colour evenly. The process is a slow one, but gives the most satisfactory results in the end. In the case of white Grapes, the exhibitor cannot always wait for best possible results, but rather aims to get the best results obtainable under the circumstances by a given date. With the exception of Buckland Sweetwater and Foster's Seedling, all white Grapes need a good deal more fire heat during the colouring period than black ones. This is particularly the case with Muscats, and those who have not tried the plan will be surprised to find how the "golden tint" may be laid on from the present time onwards by a little heat in the hot-water pipes throughout the day, except when the sun is very bright, and gradually reducing the air in the afternoon to send the temperature up to 85deg or 90deg. I could give some startling illustrations on this point about the practice of a noted exhibitor often or fifteen years ago.

An excellent stimulant for Vines during the colouring stage may be formed by mixing nitrate of potash and phosphate of potash in equal quantities. Apply at the rate of 2oz per square yard, and water it in. A somewhat cheaper yet equally good mixture is the following: Superphosphate, 3 parts; sulphate of ammonia, 1 part; sulphate of potash, 2 parts; 3oz per square yard. An occasional watering with diluted liquid manure from stables and cowsheds is undoubtedly of advantage to Vines and other fruits, but I have never found Grapes colour so well without the application of some kind of chemical manure as when it has been applied. This may be because the artificials supply food in a more appetising as well as more concentrated form than these natural manures do.—H. D.

**Vanda tricolor tenebrosa.**

To-day we figure an individual flower of a very richly marked and solidly built bloom of this variety, as staged at the recent R.H.S. Temple flower show by Monsieur L. T. Draps-Dom of Laeken, Brussels. The inflorescences are borne in heavy clusters, the flowers having intense violet purple lips, with rich chestnut-brown spots over the creamy ground on sepals and petals. It is very handsome and received a first class certificate.

The Week's Cultural Notes.

Since my last notes the weather has taken a turn for the better, and should this continue, the growth in the Orchid houses will be much more rapid and satisfactory. The sunshine and higher temperature allows us to keep more air in the warm and cool houses, and does away with the need of fire heat in the latter. In the warmest section it is always best to have a little warmth on the pipes at night, no matter what the weather. It keeps the air moving, and prevents stagnant moisture on the plants.

Although easily grown in a suitable atmosphere the tender foliage of *Chysis*, *Catasetums*, and *Cynoches* is very liable to injury in a bright period following dull weather. Watch these carefully now and lower the blind in the house in which they are grown before the foliage begins to feel warm to the touch of a person inside. In the afternoon, when the house is closed, with plenty of atmospheric moisture, the blind can be run up again and no harm accrue; but hot sun striking them with a dry atmosphere is very injurious. All these enjoy the bright weather and will grow very rapidly now under precisely the same conditions enjoyed by *Dendrobiums*. The roots must be freely watered, and light dewings given over the foliage, avoiding those growths that have reached the cup-like stage, and would collect the water to an injurious extent.

Plants of *Cypripedium insigne* that are now finishing up their growth may, with advantage, be placed in a cool and semi-shaded frame, standing the plants on a cool bottom of ashes or similar material, this being damped several times daily with a syringe. *Cœlogyne cristata* similarly treated finishes up remarkably fine growths and flowers with great freedom afterwards. Do not lose sight, though, of the fact that being practically in the open air the roots will dry very rapidly, and in consequence much more frequent watering will be necessary than when the plants were in the Orchid house.

When room is scarce in the cool house many of the usual inmates may now be removed also to a shady pit or frame. This treatment I have found to suit the macranthum section of *Oncidiums* remarkably well, also many of the *Lycastes*, *Maxillarias*, *Lælia harpophylla*, and the pretty *Ada aurantiaca*. *Odontoglossum grande* and its allies are growing freely, and may be left in the house. Should any plants still remain that require re-potting see to it at once, fine pseudo-bulbs and flower spikes only resulting when the roots are running freely in fresh sweet compost.—H. R. R.

Dr. Mules' Garden at Gresford.

Last week the members of the Chester Paxton Society, in conjunction with the members of the Chester Natural Science Society, to the number of about one hundred, had an excursion to the beautiful vale of Gresford, when opportunity was taken to visit the celebrated gardens of Dr. Mules, at the Old Parsonage, which is delightfully situated on a rising eminence about 250ft above the sea level. The cultivation of hardy herbaceous and border flowers has long been a hobby of the doctor's, and his collections of these are, perhaps, unequalled, containing as they do many rare and choice species seldom, if ever, met with in an ordinary country garden. The Doctor's numerous Continental and Colonial correspondents keep him well posted in all the novelties in the way of hardy border plants from their respective countries, and anything new that is raised in Great Britain invariably finds a home at the Old Parsonage, provided its merits are of sufficient worth to justify its existence there. The best and choicest of the old fashioned garden flowers are not, however, neglected at the expense of the more recent introductions, as many of these old favourites were noticed in the beds and borders on Wednesday.

Not only does the doctor believe in securing all the newest and best introductions in the way of hardy plants, but he also, along with his head gardener, Mr. James, takes the greatest pains to see that all his plants are well cultivated in that particular class of soil which is best suited for their proper development. The soil here being of a hot gravelly nature, clay loam, roadside scrapings, limestone chippings, and such like have frequently to be introduced to suit the requirements of those plants which refuse to exist in the ordinary garden soil. This high-class culture was plainly visible to the visitors, one of whom, a practical gardener, remarked that every plant appeared to be in the pink of condition. Of special interest was a bed of some 16ft square beautifully laid out with a choice collection of succulents, &c., and including twenty vars. Aloe, twelve vars. Echeveria, twenty vars. Agave, together with various Cacti, Ice Plants, &c.

In close proximity to this was an interesting collection of some twenty varieties of Bamboos and a healthy lot of *Nymphæas*, in all ten distinct varieties, very full of flower. The plants in the herbaceous borders which attracted greatest attention were *Eremurus Elwesianus albus*, a very fine thing, pure white, and the habit of *Elwesianus*, but a week or ten days earlier, quite distinct from *Himalaicus*. *Richardia Elliottiana* and *Pentlandi*, planted out and growing very strong. *Incarvillea compacta*, a new *Incarvillea*, and said to be very fine. *Campanula mirabilis*, fine flowering specimens. *C. thyrsoides*, very charming spikes of pale green yellow bells. *C. spicata*, blue purple spike, very good. Spikenard in flower. *Trollius Fortunei* fl.-pl. with 4ft spike. *Primula rosea grandiflora*, self-sown in masses. *Primula*

**Vanda tricolor tenebrosa.**

algida, the rarest and most highly coloured, growing very strong. *Pentstemon* species: *albus*, *cæruleus*, &c. *Achillea lingulata*: var. *globosa*. *Arabis Billandieri rosea*, nicely in flower, been out all the winter. *Oxalis enneaphylla* (hardy here).

The collection of new hybrid *Verbascums* was a sight well worth going to see in themselves, and very proud of these the doctor is. As showing the mildness of the climate at Gresford, we found *Abutilon vitifolia* in healthy growth and flowering freely; also *Berberis Knighti*, very fine; *B. diaphara*, also choice; *Cytisus Hueffli* and *C. æolicus*, both of the best class.

A well cultivated garden is always pleasant to look upon, but the pleasure is much enhanced when the history and characteristics of the flowers are so lucidly described as they were by the genial host on the occasion of this visit. Added to all this sight-seeing, Mrs. and Miss Mules most kindly dispensed hospitality in a marquee on the lawn, which, needless to say, was greatly enjoyed and much appreciated.

Before taking leave of the genial host and hostesses, a hearty vote of thanks was accorded to them for their great kindness to the party; but the doctor, with his accustomed modesty, took exception to this, maintaining that the obligation was on his part, as both he and the members of his family considered it both a pleasure and a privilege to have entertained the members of the two Chester societies. A final warning from the secretary caused the party to retrace their steps to the station, but this was not done without some amount of reluctance, as all felt that the time had gone much too quickly.—M.



Roses: Late versus Early Pruning.

The unwisdom of being "too previous" in pruning Roses in the open air was perhaps never more clearly demonstrated than during the present season. The mild bright weather of February caused the upper parts of the shoots to start into strong growth, so that by the beginning of March, in warm districts, the leaves were unfolding rapidly, so much so that the cultivator needed a cool, calculating head to prevent being tempted to use the pruning knife on them thus early. Many could not resist the temptation after the middle of March, with the result that the severe frosts of April completely ruined the buds which started quickly after pruning. Standards and bushes so treated at the present time, as a rule, look miserable, as what growth there is is extremely weak, and great trouble is given with aphids and caterpillars, and good flowers will as a consequence be conspicuous by their absence.

The healthiest and most promising lot of Rose bushes in the open air that I have seen this year are at Barford Hill, near Warwick. The growth is strong and clean, and there is an entire absence of rusty leaves and growths so noticeable where early pruning was practised. Mr. R. Jones, the head gardener, has always been a late pruner, but this year, on account of the cold winds which prevailed late in March, pruning was deferred till the second week in April. Both Mr. and Mrs. Smith-Ryland are particularly fond of Roses, and by reason of their gardener's forethought they will be able to have them in their usual abundance this year also, when so many are bemoaning the sorry condition of their trees.

Those who will have Roses in the open air as early as possible must, of course, prune early, but the man who wants plenty of fine flowers, and does not mind waiting for them, had far better prune a little late than too early.—H. D.

Tea-scented Roses.

In the centre page illustration we depict a group of Tea Roses, termed by one authority the élite of the Rose world, and they are Niphetos (top), Madame Cusin (the red), Devoniensis, and Gloire de Dijon. Tea Roses are, and ever will be, favourites. Owing to the backwardness of the present season Tea Roses, more than others perhaps, lack the refined quality which they usually possess in favourable seasons. The darker coloured varieties are somewhat tabooed in this delicate section of Rosa, but signs are not wanting of a change toward a wider range of hues. Together with the varieties we figure, the following are among the best popular sorts: Catherine Mermet, Maréchal Niel, Souvenir d'un Ami, Rubens, Caroline Kuster, Souv. de S. A. Prince, Hon. E. Gifford, Anna Olivier, Mme. Margottin, Francisca Kruger, Comtesse de Nadaillac, and Innocente Pirola. These Roses do well away in the north, even as they succeed in southern counties, though the elegance and smooth beauty is not so prominently noticeable amongst Scottish Tea Roses. In all cases, however, they require considerable care, there being so many evils to guard them from.

Gadding and Gathering.

From the introductory notes on Messrs. Dicksons' nurseries (Chester), it was seen that this representative firm had put into commerce quite a number of the finest ornamental hardy subjects. They believe in being up to date in everything, whether it be new Roses, new Conifers, new seed cleaning machines, or matters of business technique, and their business places and nursery quarters are all exceptionally well appointed. Even in the new office at the "home" nurseries they have what can accurately be called a small museum of botanical and entomological specimens, and in the same room there is a collection of garden implements, from sécateurs to scythes, and nail-bags, trowels, rakes, rollers, *ad infinitum*.

HALF A MILLION ROSES.

The Roses are a special feature, covering close on twenty-five acres, a quarter of a million dwarfs having been grafted last year, together with some 50,000 standard Roses; and as only a few score of plants remained, the reader may gather from these figures how great is the output. All the newest varieties are included, and every care is exercised to produce the best possible stock. The Rhododendrons are another section of ornamental shrubs to which both space and time is liberally given, with gratifying results, and the selection of handsome standard Rhododendrons is indeed very extensive; and these, coming from this loamy soil, when given a peaty compost in private

gardens, speedily become established, and assume the most robust character. And the Hollies here at Chester are exceptionally good, being of an even, bushy shape, with large, dark, glossy foliage. *Ilex Hodginsi* and *I. nobilis* are greatly in demand, and the handsome *I. camelliæfolia* is another, to form a trio. The gold and silvery variegated forms, and the milkmaid and hedgehog Hollies each find a place.

ERICAS AND DWARF SHRUBS.

Nor are the dwarf mountain sub-shrubs overlooked, for seldom will a better collection of Ericaceæ be seen than that covering perhaps two acres of ground in the home grounds. The Mediterranean Heath, with *Erica cinerea*, and *Cytisus albus*, *C. scoparius*, *C. Andreanus*, *Andromeda*, and *Arbutus* find a place, in varying stages of their growth. And of a very different nature are the Japanese Maples, in great quantities and of all sizes; while in frames close against where these were could be noted a collection of Show and Alpine Auriculas in pots, which quite surprised me for the variety and general excellence of it. Not far off, either, one could see the fading remains of the popular Narcissi, and Sir Watkin of old-time fame is grown to the number of half a million bulbs; yet while the commoner sorts are so liberally set out, from intimations already given we know that some of Mr. Engleheart's seedlings are in the firm's hands for distribution.

THE GLASS HOUSES.

Glancing at the houses, their occupants are too numerous to name in detail, but one must rapidly survey the stout-wooded pot Roses, the big collection of pot Clematises, the greenhouse Rhododendrons, the magnificent tree Pæonies, already in flower, and some had seen service at the Chester races about the time of my visit; and with these come the Regal and Zonal Pelargoniums, the fine stock of Tree and Malmaison Carnations, *Romneya Coulteri* filling an entire house, and some span-roofed structures with pot Vines of first-class excellence. The long clean shoots, stout and fresh, and the large leathery foliage were demonstrative of really good Vines. The same remark can be applied to the trained Peaches of all forms and sizes, and I was informed that a great export of these to Italy had been made during the spring by Dicksons. Out of doors there are goodly quantities of pot Apricots, Apples, and Plums (some of them 6ft high) plunged in ashes. On either side of the main entrance to the grounds there are mixed borders of choice trees and shrubs, the study of which would be of importance as a guide to those about to plant extensively.

THE SEED HOUSES.

The seed houses and business shop of Dicksons is situated in the main thoroughfare of the beautiful and anciently historic town, and from the back parts of the building the lovely Cathedral appears. Seen with its carpet of garish-green grass and half buried tombstones, the elegant and extensive Cathedral, built of charming pink-mauve stone, is a sight that no one can surely help admiring. Messrs. Dicksons, Ltd., are as strong in agricultural machinery as they are in the gardening implements, and the storehouses for their reapers, &c., are behind the shop. The Eastgate front faces "The Rows," those remains of mediæval antiquity which are characteristic of Chester and very few other English towns. "The Rows" are long timbered galleries built on a raised stone pavement or side walk, and the line of old-fashioned shops at the back are thus screened from sun or rain the whole way through. Many of the houses are historical and famous, and not a few are built in the half-timber pattern.

In St. John Street are the agricultural seed stores (for it must be borne in mind that the farmer, as well as the gardener and forester, makes large calls on the firm's resources), with the seed-cleaning machines, the largest and most powerful being driven by electricity from the city supply, and a very speedy and effectual seed-cleaning machine it is. The old "jumpers" are now going into disuse under the stress of the newer rivals. Cereals, grasses, Clovers, root-crop seeds, and sackloads of Potatoes fill floor on floor, though in May, of course, the stores were practically cleared. Importations of seeds are made from all the world wherever the best is obtainable. Even New Zealand, and certainly the U.S.A., contribute their annual quotas of Clovers and grasses. On the basement floor of this fine store the visitor should not omit to see the remains of a Roman wall, which has been inspected by many archaeologists and others. During excavations some years ago the workmen unearthed this solid stone wall, and would soon have proceeded to demolish it had not Mr. Geo. Dickson, the senior partner, discovered and stopped the vandalism. So now it stands there, safe and protected. Chester was a little township prior to the Roman invasion, and these gallant warriors made it one of their principal stations, laying down four leading ways, now termed Northgate, Eastgate, Watergate, and Bridge Street, and they encircled the town with a wall and gates. Few will leave Chester without a walk round its ancient wall, which is the most perfect example of its kind in the kingdom. Eaton Hall, the palatial residence belonging to the Duke of Westminster, is some three miles distant from Chester, and I believe visitors can view the grounds and house by ticket.

NOTES & NOTICES

Croydon Horticultural Show.

The Croydon gardeners are holding their annual summer show on Wednesday next, July 8, in the grounds of Addiscombe Court, Addiscombe Road, Croydon, when a good exhibition is expected. There are 127 classes.

Messrs. Barr at the Royal Botanic Gardens.

Messrs. Barr and Sons (of King Street, Covent Garden) are holding their annual exhibition of hardy flowers and Japanese pigmy trees at the Royal Botanic Gardens, Regent's Park, from June 29 to July 5. The band of the 2nd Life Guards was in attendance yesterday, July 1.

Ulverston Rose Show.

The North Lonsdale Rose Society will hold its exhibition of Roses, Sweet Peas, Stocks, and herbaceous flowers at Podbush Park, Ulverston, on Friday, July 10, next. On this occasion there will be a liberal distribution of prizes and medals, amounting in all to some £135, including a challenge trophy and a challenge cup for Sweet Peas valued at £30. Entries close upon July 7. To facilitate attendance the committee have made arrangements for the issue by the railway of cheap excursion tickets.

Isle of Wight Horticultural Association.

On Thursday, the 18th ult., a party of members of the above association, accompanied by Dr. Groves, J.P., and Mr. W. Tribbick, one of the hon. secretaries, had a visiting day at Ryde. "By the courtesy of General the Hon. Somerset Calthorpe," writes one of the party, "we were first permitted to visit his lovely Island seat, Woodlands Vale. In the laying out of the beautiful grounds here the exquisite skill and taste of the landscapist's art is most pronounced, the terraces at varying heights presenting an imposing and pleasing appearance. The walls of these latter are aglow with hardy Fuchsias, thriving luxuriantly, Ceanothus of azure blue tints in profusion of bloom, and many others. Interspersed on these terraces with artistically designed flower-beds are fine specimens of Cupressus macrocarpa, the quickest grown of all this genus, and other choice Coniferæ, including in the background a fine Picea pinsapo. Amongst other subjects surrounding the pretty ponds were grand pieces of Phormium tenax coming into flower. Under glass Grapes, Tomatoes, Figs, and Peaches are grown, the last-named extensively. The trees are looking remarkably well, and are heavily cropped. Strawberries and Raspberries are exceptionally good in the open. A luncheon of substantial viands was followed by an inspection (by the kind invitation of Captain Daubuz) of Buckingham Villa, with its most interesting gardens and the rare collection of trees, plants, and shrubs. Here are many subjects which never come under the observation of the ordinary gardener. The gallant Captain is conversant with the habitats and cultural requirements of all his pets, and has actually imported soil from the Table Mountains, the home of the Disa grandiflora (scarlet Orchid), and sand from the Coast of Cornwall for plants indigenous to that locality. These gardens are not exclusively devoted to rare plants. Roses are superbly grown and flowered. A standard of William Allan Richardson, 6ft through, excited our admiration, and also a magnificent Wistaria, covering in festoon the front of the house. Captain Daubuz was thanked for his great kindness and hospitality shown us, and his gardens were unstintedly praised. The Rose show then claimed our attention. Blooms almost perfection were to be seen in leading stands, and, speaking generally, considering the adverse conditions prevailing this season, the whole display was meritorious in all respects. Through the kindness of Mr. Goble, we were privileged to visit his extensive and renowned nurseries. Carnations are a speciality both in pots and open quarters, and are well grown. Zonal and hybrid Pelargoniums are in quantity and perfection, and hundreds of Orchids in the rudest health. The largest Tomato house, 150ft by 30ft, was a sight to remember. About three tons are annually cut from this one house. Mr. and Mrs. Goble generously provided tea for us on the lawn attached to their residence."

London Shows.

Yesterday, July 1, London had three interesting flower shows, one at the Temple (Roses), one at Regent's Park (hardy flowers), and a general show at Richmond. Is this not too much?

Gardening Appointments.

A. V. Coombe, foreman in Longford Castle Gardens, has been appointed to succeed Mr. G. W. Musk as head gardener to Lord de Ramsey, Haverland Hall, Norwich. * * John Peattie, foreman in the Gardens, Overtoun, Dumbartonshire, as head gardener to James Kennedy, Esq., Doonholm, Ayrshire.

Map of the Republic of Peru.

We have received from Mr. Edward Higginson, Consul of Peru, Southampton, a map of that country, with a short description of its climate, features, resources, political organisation, agriculture, commerce, mining and other industries, &c., and the object of the publication is to make known what Peru really is, and what it can offer to emigrants. Copies are obtainable on application to Mr. Ed. Higginson.

Bristol Gardeners' Association.

This association held its usual meeting at St. John's Rooms, on Thursday, June 25, Mr. E. Poole presiding. The evening was set apart for the reading of "Horticultural Clippings." Prizes being offered for the most interesting. Twelve of the members competed for the prizes, which were awarded to Messrs. Curtis, Kitley, and Hancock. A certificate of merit went to Mr. W. H. Davis (gardener, Mr. Curtis) for *Odontoglossum Pescatorei*.

Sussex Weather.

The total rainfall for the past month at Abbots Leigh, Hayward's Heath, was 4.33in, being 2.32in above the average. The total fall for the six months was 16.48in—4.31in above the normal. The heaviest fall was 1.74in on the 13th. Rain fell on eleven days. The maximum temperature was 83deg on the 28th, the minimum 36deg on the 13th. Mean maximum, 69.07deg; mean minimum, 46.25deg; mean temperature, 57.66deg, which is 2.15deg below the average. Since the 20th fine warm bright days have brought a welcome change. It came just in time to save the Strawberry crop, which is a fine one.—R. I.

Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, July 7, in the Drill Hall, Buckingham Gate, Westminster, 1-5 p.m. Lectures on "Hardy Irises" will be given by Miss Armitage, and Mr. Caparne at 3 o'clock. * * At a general meeting of the Society held on Tuesday, June 9, 132 new Fellows were elected, amongst them being the Earl of Munster, the Countess of Lucan, Sir Algernon West, K.C.B., Sir William Eden, Bart., Lady Liddell, Lady Meyrick, and Lady Young, making a total of 900 elected since the beginning of the present year.

Market Gardeners and Trade Protection.

A correspondent recently wrote to Mr. Chamberlain pointing out that market gardening is an industry which has suffered severely from foreign competition, and asking if his scheme would include the placing of a duty on Apples and other fruits and products sent from the United States and France at low transit rates, which enabled the foreigner to compete most unfairly with the English grower. The following reply has been received:—"I am directed by Mr. Chamberlain to acknowledge the receipt of your letter, and to say that the principle must be established before we enter into details, and that each case must be considered on its merits.—Yours obediently, J. WILSON."

Weather Notes in Hamilton District.

A welcome rain, but too late for many things, visited the district last week. The Clydeside Strawberry crop will be greatly benefited, if it does not continue long enough to damage the berries, which, by the way, are expected to be ready for market in a few days. The crop will be generally lighter than usual. The frost of the 20th appears to have been universally felt over the greater part of Scotland. Letters from friends tell me that the Potato crop in several places is practically useless, and beyond recovery. A south-east gale of considerable force on the 26th made no small amount of havoc among Peas and other vegetables in the vicinity. Contrary to the expectations of many, the hay crop is evidently to be lighter everywhere than usual.—D. C.

The "Daffodil King" on Tour.—No. 5.

(Continued from page 533, last vol.)

The conclusion of the fourth instalment of these notes, taken at an interview with Mr. Peter Barr, V.M.H., on his return to London, England, ended with a summary of his impressions of Philadelphia, Pa. These four sections of this serial have briefly summarised the course of Mr. Barr's tour in the Eastern States of the Union, and Canada, and now we make the passage of the great American desert to the fertile, prosperous groves of sunny California; and in this place the interviewer has thought it fit to introduce Mr. Wm. Robinson's description of the central desert of North America, which stretches over parts of Texas, Mexico, and Arizona. In his book, "Alpine Flowers," Mr. Robinson says: "The passage of the great American desert which is crossed on the way from New York to San Francisco is, perhaps, the best preparation one could have for the startling verdure and giant tree-life of the Sierras. Dust, dreariness, alkali—the earth looking as if sprinkled with salt; here and there a few tufts of brown grass in favoured places; but generally nothing better than starved Wormwood, that seems afraid to put forth more than a few small grey leaves, represents the vegetable kingdom in the plains of the desert region. Where the arid hills, showing horizontal lines worn by the waves of long-dried seas are visible, a few thin tufts of Alders and Poplars mark their hollows; while Willows fringe the streams of undrinkable water which courses through the valleys. A better idea of the country can scarcely be had than by imagining an ash-pit, several hundred miles across, in which a few light-grey weeds, scarcely distinguishable from the parched earth, have sprung up."

But beyond the great barrier chain of mountains lies California, the land of Oranges, Grapes, and Cereals; Southern California has, indeed, what geographers call "a Mediterranean climate," comparable with the Mediterranean region of Europe, central Chili, the south-west of Cape Colony, and the south-west of Western, and the south of South Australia. "These various regions are characterised by remarkably dry summers, but more or less rainy winters, the total amount of the rainfall, and especially of the summer rainfall diminishing as the latitude decreases." (G. G. Chisholm, M.A., B.Sc.) And now to Mr. Barr's tour and his impressions.

Of Los Angeles the tourist had not much to say, beyond stating that it was an interesting town with a very nice public park and garden, and it is surrounded by Citrus groves—the Citrus culture being a great and growing industry in this auriferous State. After Los Angeles the rail conveyed our traveller to Santa Barbara to meet his old friend Mr. Dreer, the famous seedsman and nurseryman of Philadelphia, and in his company spent a few days looking around this "American Mentone," situated on the coast plain, at the base of the foot-hills, with the Santa Ynez Mountains a little further off. Here our traveller made a diligent search for Calochortus, but owing to the extreme dryness of the season one only was found in flower, with a few scanty patches of Eschscholtzia. He spent a little time with the enterprising Dr. Franchesi, who is well known for his frequent contributions to garden literature, and who at the time was extending his culture and increasing his wonderful collection of plants, but, like most lovers of plants, was doing more for the pleasure of mankind than for his personal benefit. His daughter proved a tower of strength to our good friend in looking after the shop.

Here lives the world-known Mrs. Shepherd, in the midst of her flower garden, pushing trade with the energy and keen eye to business—a developed trait in the American character, and it is in this the Yankee leaves all creation behind. Every little advantage is taken. All the leading hotels and the railways are in league. You want to know where and how to go to a place, instead of bothering the porter or managers, you simply go to a cabinet, and there you find all the literature necessary for a tour round the world or a run to the nearest town. Most of these railway time-tables are veritable albums, with views and descriptions galore. Mrs. Shepherd had in flower the largest Eschscholtzia flower Barr had ever seen or ever expects to see unless he pays another visit to Santa Barbara. There are other specialists in flower culture besides Mrs. S. in this place, but she is the smartest by a long way. She soon makes you feel you are to do your business and go about your business.

Passing up the valley of Santa Clara, he passed through miles and miles of Prune orchards, and here also is made the famous Californian wines, "not the rubbish (to quote his own words) that comes to Britain, but the article that is sold in the United States under European names." Californian wine that is usually sold in the United States is just the same "rubbish" that comes to this country, and which is undrinkable to those who know what a really good glass of wine is. Santa Clara is also the great seed-growing centre, and hundreds of acres are under culture, much of the labour being Chinese and Japanese, the latter especially in connection with nursery work. They are handy and painstaking.

Santa Rosa is known in horticultural annals all over the world from the fame of Luther Burbank, the "Wizard of Horticulture," as his countrymen have named him. Mr. Barr describes Burbank

as a pushing, enterprising man. When the Anglo-Scot visited his garden Mr. Burbank had one Plum tree with not less than 500 grafts. With his seedling Plums, "he sows the seeds in spring; the wood is ready for grafting in the autumn, and in two seasons he has fruit." Satisfied that he has a good variety, he at once commences propagating from the wood, and the stock he will sell to any nurseryman, but failing to sell in this way, he sells the wood at so much per foot. Mr. Barr inquired whether the famous hybridiser kept one tree of every variety he introduced, but the answer was in the negative. Mr. Burbank leaves the risk to the purchaser as to the varieties retaining their characters or not.

Besides Plums, "The Wizard" works with Amaryllis and Lilies, but it did not seem to Mr. Barr that he worked on any definite lines—with Lilies at least. When the question was put as to whether he used Japanese, European, and American Lilies. Mr. Burbank replied that he did, and crossed with the whole of them. "Max Leichtlin, however," adds Mr. Barr, "doubts very much Burbank's success with Japanese and American Lilies." Immediately prior to the "Daffodil King's" visit, Mr. Burbank had signed the entire stock of the seedling Lilies to one of the eastern dealers, and many of these afterwards came to Great Britain, and from the correspondence in the gardening papers "on this side," these Lilies do not appear to have been of a specially valuable nature. On the other hand, Mr. Carl Purdy says that he saw many of them in bloom, and there were numerous fine subjects amongst them, so that (and we are using Mr. Barr's words) we may yet look for some good Liliiums from Burbank's hybrids.

Santa Rosa is another wine district, and the white wine given to our traveller at the hotel was very good, "but the red wine was vile!" Mr. Barr paid a visit to Carl Purdy at Ukiah, and learnt that this gentleman passed through his hands all the bulbs collected on the Pacific Coast, and Barr went up into the mountains where he was experimenting in Lily culture, which seems likely to provide America with good sound bulbs. All the fine Calochorti and Erythroniums (Dog's-tooth Violets) are specialised by him.

Returning southward and reaching San Francisco, Mr. Barr was much impressed with this splendidly situated city which, he says, should be viewed from the waters of the Golden Gate. (*En passant*, the Tea Rose of that name, which is creamy white, takes its appellation from this Strait.) Near the Golden Gate there is a rock covered with seals, some of them supposed to be of great age. They are carefully protected and allowed to reproduce their kind, which they do freely. This rock, its seals and the Cliff House form one of the sights of San Francisco. The magnificent park of this city was made under the direction of a Mr. McLaren, and though now planted with trees, shrubs, bulbs, &c., it has been formed out of most unpromising material. The superintendent took Mr. Barr to an elevated site, and pointed to the shores of the Golden Gate where the sand was in great straths, and liable to be blown about by the winds. Mr. Barr remarked that all that had been accomplished in the formation of the park was to cut out the roads and paths, and to retain the natural conformation of the moving sand. This was so. Mr. McLaren had found a purpose for an indigenous grass that affects this shore, by planting and sowing it over the sand to ensure the fixity of the latter. Following on this he planted trees, and in 1899 he was to put 6in of loam over the surface. The question of money never has to trouble Mr. McLaren, he having as much as he requires for his operations. The park is continually being extended, so that there is always a portion of virgin "sand" being brought under control, but the area under operation is screened off to visitors in the park, who generally do not know of the work that is being undertaken, because they see nothing of it. When a stretch of ground has been completed, the screen is carried back to the verge of the unreclaimed land.

Thus ends the American notes, for in March, 1899, Mr. Barr sailed for Japan, which country will be dealt with next.

Gardeners' Royal Benevolent Institution.

The annual festival dinner was held in London on June 24, the Right Hon. the Earl of Warwick presiding. As usual at this great dinner, the chairman was supported by leading horticulturists from London and its environs, as well as from many parts of the country, to the number of about 160. After an admirable repast, the loyal toasts were proposed in appropriate pregnant remarks by the Earl, and the toast of the evening, that of the Gardeners' Royal Benevolent Institution, followed. The chairman observed that he highly appreciated the privilege he had, in having been asked to preside over the gathering, and, continuing, said that no one could fail to observe in the daily papers the unflagging interest in all charitable institutions for the relief of distress amongst workers in every industry which engages the people of this country. Horticulture and agriculture are closely allied, and while the latter occupies the greater share of attention, the former is growing each day. Facilities of transport are bringing to our shores the choicest and tenderest

fruits from every country in the world, and the Earl instanced a case of his own, where he had lately received from an Indian prince a present of native fruits in grand condition. Flowers and market garden produce will more and more be in demand, and the chairman thought it was a duty, therefore, to provide for the aged, needy workers in horticulture, and to keep their case before the generous public, and gardeners themselves should discuss ways and means for augmenting the funds of the Institution. "Who are not lovers of flowers?" asked the Earl of Warwick, and added that at the christening, the marriage, the festival, the funeral, flowers have become all but a necessity; for flowers express our sympathy, as they also please the mind.

But while speaking of earth's blossoms, the Earl could not forget the articles of consumption, and he had vivid recollections of being chased round the garden of his boyhood by the old gardener with a big stick, from whose crop of luscious fruits he had surreptitiously taken his choice. And even now, when he could take them with more equanimity of conscience, he was sure he did not enjoy them less.

Readers of "Country Life" and similar journals must have often been struck with the broadness of view in matters of gardening evinced by our ancestors. He thought the popularity of horticulture likely to increase. To the great shows of the metropolis and elsewhere he need not allude, but he must draw attention to the allotment-cultivators' exhibitions, and to Lady Warwick's exemplary work in aid of horticultural and rural pursuits as a calling for women. "Lady Warwick," he said, "is trying to snatch from mere man some of the triumphs of horticulture," and none of us will begrudge what she can do in the cause to which she has set herself.

Coming to the G.R.B. Institution itself, the chairman observed that for over fifty years it enjoyed the patronage of the late Queen, and is now under the patronage of the King, Queen Alexandra, and the Prince of Wales. There are now 204 pensioners on its funds; it has annual liabilities of fully £4,000 and an assured income of only £900. All the rest of the money has to be subscribed, and it is for the augmentation of the funds that the festival meeting is arranged. The chairman further pointed to the two special funds of the Institution, the Good Samaritan Fund, and the Victorian Era Fund, the first giving assistance to the most needy applicants who have sought and the other to assist the most needy applicants who have sought or are waiting for election to the pension list. Since the foundation of the Institution in 1838, £100,000 have been distributed.

Applicants who have been subscribers to the funds have a preference over non-subscribers, inasmuch as they receive 100 votes for each year that they have subscribed one guinea. A letter from H.R.H. the Prince of Wales was then read, in which it was announced that the Prince had sent £20 to the funds, and expressing a hope that the festival meeting would be very successful. After referring to the Masonic friends which the Earl saw around him, he remarked that with so many charitable institutions throughout the country, it was necessary to discriminate in giving to them; but from his own experience, the Earl of Warwick said that every gentleman could give to the funds of the Gardeners' Royal Benevolent Institution with the fullest confidence that the money was well and wisely dispensed. He coupled with the toast the name of Mr. H. J. Veitch, who is treasurer and chairman of committee.

In his response, Mr. Veitch thanked the Earl for affording the company the honour of his presence that evening, and for the kind words which he had delivered. Mr. Veitch claimed to know something of the working of the Institution, and said that all its details were essentially good. The committee was composed of thirty-six members, one-third of whom must be private gardeners, one-third business horticulturists, and the remaining third are gentlemen who are deeply interested in the gardeners' calling. The committee is thus thoroughly representative. The rules bind the committee to meet four times each year, but so great is the work that the members met nine times. The committee receive absolutely no remuneration.

Mr. Veitch, continuing, said that owing to the new rules, the work during the last year had been much heavier. He referred to the election of eleven Coronation pensioners, and stated that others, who had not been subscribers, but who had applied for relief, each received £5. He read letters from two old pensioners who were very thankful and appreciative for the few pounds per year awarded to them, and these letters were similar to a great many others the committee received. The Institution is in every sense a benevolent one, and in no sense a merely benefit society. Mr. Veitch mentioned that last year Mr. N. N. Sherwood presented each unsuccessful candidate with £5, as a thank-offering on his recovery to health, and twenty-nine received this amount, including eight who had never been subscribers.

The treasurer also mentioned the good work done by the auxiliaries, which yearly send up a handsome sum. The Worcester branch contributed £125, and have sent £700 since they commenced. Reading branch had come second with £117, Bristol £80, Devon £44, and Wolverhampton £25. Another source of income was the takings at Earl Ilchester's garden, which gave the funds £110. The Institution requires from £4,000 to £5,000 each year. Referring to the pensioners, Mr. Veitch drew



Schœnia cassiniana.

(See page 8.)

attention to an aged couple who, between them, had received £265, yet their little subscriptions had only amounted to £25. He warmly complimented the painstaking, constant labour of Mr. G. J. Ingram, the secretary, who gets overworked sometimes, but always sticks to it. In conclusion, Mr. Veitch said that the committee's great reward was in having increased subscriptions, to help the many needy cases still waiting. Lord Redesdale, Alderman Robert Piper, and Mr. A. W. Sutton also spoke to toasts. Mr. Sutton suggested that ladies should be invited to the festival dinner, and he hoped that probably Lady Warwick might be the first chairwoman. The total subscription amounted to £1,750. The tables were decorated with choice flowers from Messrs. Veitch, C. Turner, Paul and Son, Barr and Sons, Cutbush and Son, W. Iceton, J. C. Stevens, and W. Robinson.

Subscriptions were received as follows:—Prince of Wales, £20; Baron Schröder, £100; Rothschild and Sons, £105; Earl of Warwick, £25 and 3 gs annual subscription; A. W. Sutton, £50, also £20 to Good Samaritan Fund; M. H. F. Sutton, £50; N. N. Sherwood, £50; Dicksons, Ltd., Chester, £20; H. J. Veitch, £10 10s.; Mrs. H. J. Veitch, £5 5s.; J. Veitch and Sons, Ltd., ann. subs., £52 10s.; Proprietors of "The Garden" and "Country Life," £15 15s.; Thames Bank Iron Company, £10 10s.; Mrs. Alf. J. Baker, £10 10s.; per G. Monro, Covent Garden, and other friends, £85 (including Jas. Rochford, 10 gs.; J. Rochford, 5 gs.; E. Rochford, 5 gs.; J. Sweet, 5 gs.; G. Monro, Ltd., 5 gs.; Geo. Monro, 5 gs.; "J. M. S.," 5 gs.); A. McKellar, £17 17s.; R. Dean, £31 10s.; W. H. Massie (Edin.), £12 12s.; D. Fleming, £20; G. Profit, £32 10s.; G. Norman, £21; W. MacKay, £25; E. T. Cook, £7 7s.; J. Douglas, £8 8s.; W. Paul and Son, £10 10s.; James Hudson, £10 10s.; W. Thompson, £10 10s.; Barr and Sons, £10 10s.; Bailey Wadds, £27; Henry Williams, £8 18s.; L. Salomons, £21; and 5 gs from each of the following: Cutbush and Sons, H. J. Adams, E. G. Braikenwiche, W. J. Jefferies, W. Sherwood, Ed. Sherwood, R. McVitie, Lord Redesdale, A. Waterer, H. G. Cove, James Lee, R. and G. Cuthbert, W. J. Nutting, W. L. Corry, A. B. Wadds, R. Sydenham, N. F. Barnes, Bunyard and Co., G. H. Maypock, H. J. Winsett, and G. H. Richards; and other sums making a total of £1,750.



Pot Vines at Cardiff Castle.

Wending my way into these gardens a few days ago, reflecting on their former glory and pleasant associations, and, alas! on the now changed scene, I recounted the many cultural triumphs of our late and much lamented friend, Mr. Pettigrew—his wonderful Melon crop, his many new varieties raised, his Cardiff Castle Cucumber, his magnificently trained fruit trees, each monuments to his method and skill. Above all, he had extraordinary success with pot Vines, grown into fruiting condition in one season, and always laden heavily with bunches of the finest description. This season the pot Vines are again excellent, thanks to the practical care of Mr. Farmer, who, as foreman, was for several years Mr. Pettigrew's right hand, and especially so during the latter part of his long and painful illness. This success reflects great credit on Mr. Farmer, who remains in charge of the gardens for the present. The varieties grown are Black Hamburgh, Alnwick Seedling, Foster's Seedling, Madresfield Court, Black Alicante, and Black Morocco, the latter particularly good, and all were carrying nine to twelve bunches each of more than average weight. Last year Mr. Pettigrew grew Diamond Jubilee and fruited it well, but was not pleased with its quality. Whilst sincerely lamenting the loss of our genial friend, the thought would occur, that the fates had been kind in sparing him the pain of beholding the ruthless demolition of much of his life's labours, for it is to be feared that the gardens are doomed to make way in the near future for the utilitarian demon in the garb of bricks and mortar.—L. ARDAITH.

Aubrietias.

For the rockery, or for edgings to paths, Rock Cresses are valuable plants, and also for spring bedding they make a gay display during April and May, and even well into June were they required. Thanks to the enterprise of several persons, we have now much variety to choose from; new and distinct colours are now taking the place of such sorts as *deltoidea*, which is no doubt the parent of many. A. Dr. Mules is, in my opinion, quite the best of the dark purple varieties; it is a distinct improvement upon A. Hendersoni, being deeper in colour and more compact in growth, exceptionally free flowering. This is quite a gem. A. Moerhemi is a distinct break in colour, being a deep rose pink. When first expanding the colour is quite pale, one might almost describe it as "washy," but if one waits to see the blossoms fully developed it is quite another thing. I think this has been the cause of some writers' disparaging remarks—a too early opinion. The growth is vigorous, the foliage being of a glaucous tint. Another point, too, in its favour is the length of time the flowering season extends.

A. Fire King has, perhaps, the brightest colour of all—glowing crimson. It, too, has the merit of lasting a long time in flower. In growth it is vigorous. A. Leichtlini deserves a position in every collection; its colour—bright rose—quite enlivens that part of the garden in which it grows. The habit of growth is compact, while its freedom in flowering cannot be excelled. A. Souvenir of Wm. Ingram has larger flowers than the foregoing; the colour is rose pink, changing to pale blue, with paler centre markings.

A. Campbelli (syn. Hendersoni) is a rich violet purple, the blooms are exceptionally large. The growth is rather straggling, in other respects worthy of a place in any collection. The new varieties, Bridesmaid and Lilac Queen, raised and distributed by Messrs. Barr and Sons at their Ditton Hill Nurseries, are a distinct gain; the former soft blush, and the latter a soft shade of lilac. Aubrietias are easily propagated. Where a sufficient stock is available, to get quickly good plants for flowering the following season, division of the roots is a good plan. Directly flowering is past cut away all the flowering shoots and pull the roots in pieces, and plant them in sandy soil to which is added leaf mould freely. Choose a northern aspect, as this site dispenses with the necessity to shade daily should the weather be hot and dry. The more scarce varieties should be increased by cuttings taken off now and inserted in sandy soil in a cold frame.—E. MOLYNEUX.

Veronica spicata.

Though most gardening books seem to omit this species from their lists, it is nevertheless a desirable plant and said to be a native of Britain. The illustration on page 15 portrays the habit and free-flowering character of the bush, covered with its dense spikes of blue flowers. It is a dwarf grower 1½ ft to 2 ft, and is mainly to be commended for the rock garden. Our photograph comes from Mr. C. Jones, of Ote Hall.

Schoenia cassiniana.

This is a pretty greenhouse annual, a Composite, with pink and rose flowers, borne in umbels. These are of the "Immortelle" type (i.e., "Everlasting"), as the plant is a native of the drier regions of the Swan River, W. Australia. Schoenia is nearly allied to *Helipterum*. An award of merit was given to Hurst and Sons, 152, Houndsditch, E.C., when they staged plants of it before the Floral Committee of the Royal Horticultural Society on June 9.

New Calceolarias.

Writing from Udston, Hamilton, N.B., Mr. D. Chisholm (in sending flowers) says:—"No. 1 Calceolaria: This is a cross between Dalkeith strain herbaceous Calceolaria and Golden Gem hardy shrubby Calceolaria. The latter was the seed parent. The cross is well suited for bedding, both the foliage and flowers are more attractive than the seed parent.

"No. 2 Calceolaria: This is a cross between No. 1 and Veitch's finest herbaceous strain, the former being the seed parent. There were many colours, but this is the best formed and marked. It takes the character of the seed parent in the foliage, which is robust and abundant."

A New Strawberry Fiend.

One becomes so accustomed to the visit of the common thrush and blackbird at Strawberry time that they are expectant and realised troubles, and thus always provided for. This year these birds had hardly made their presence felt, the abnormally wet and rainy time providing abundance of worms, which is the natural food of both thrushes and blackbirds, when the small brown linnet made raids on the forwardest berries. This is a new trouble, and one not so easily dealt with unless smaller meshed nettings are employed. Ordinary fish nettings purchased for the protection of fruit avail nothing for the brown linnet, they pass through the meshes almost as easily as though they were not present.

The brown linnet has up to now been regarded as one of the few of the gardener's feathered friends. They have even been encouraged here in their nesting, for which purpose the Gooseberry bushes afford them ideal spots. Being mostly seed-eating birds, they do much good among many noxious weeds, and usually here they are seen only in the spring and early summer. I can only remember one season when they were a trouble to the seed beds; then, as if to meet the exigencies of season, they stepped in to replace the absent chaffinch. Bird life has apparently not that uniformity of habit one is inclined to accredit to them—at least, I have found from year to year that though by common consent they claim certain crops as part of their diet, they evidently do not bind themselves to anything that would imply etiquette in custom or season.

Most growers are acquainted with the worthlessness of Strawberries attacked by mice. The surface of the fruit is simply peeled off by the removal of the seeds. Exactly the same appearance is given to the fruit after the linnet has adapted the seeds to his purpose, and I note they are not so particular about the perfect ripeness of the berry. Probably the nature of the season accounts for these vagaries of bird life. It cannot be the absence of weed seeds that accounts for the linnet freak, for everywhere just now the weed trouble is in the ascendant as an element of controversy. It would be interesting to know from other readers whether this new addition to Strawberry connoisseurs is giving similar experience elsewhere.

It is regrettable always to have to destroy birds that may do so much good in their own way, but when their numbers increase as they do so plentifully, given unmolested breeding accommodation, it soon develops into a serious question when they take to a new custom like that of fruit eating. They are not in the least shy, but will come almost within arm's length and help themselves in spite of net coverings. In a similar manner bullfinches will take a fancy to Raspberries in some, though not in every, year, and in town gardens the starling is an equally dreaded robber.—W. S.



Gardeners' Commissions.

I enclose herewith slip which has been received by me inside a foreign catalogue of bulbs. I have noted with interest the correspondence which has taken place in your paper relative to gardeners' commissions, and it appears that on this question probably firms in this country are being fathered with the sins of foreigners if the enclosure is to be taken as an instance. With the Bill before Parliament it occurs to me as to how the point of the foreigner offering discount is to be met with, as obviously to prevent corruption (so called) by English firms, some means should be adopted for this to apply to foreign firms; if it is not so it would be a very anomalous position. This does not appear to have been dealt with in any correspondence hitherto appearing, and I think it is a point which deserves consideration.—MONITOR.

Back to the Land.

Taking it for granted that "D. C." is speaking from actual experience of unsuccessful holdings, I must confess that mine is entirely confined to the Evesham district of Worcestershire, where small holdings are the rule, and where they are ousting the farmer every year. But there must be the right stamp of men, and they are not produced in six months, and scarcely in one generation. Farm land is every year turned into allotments in this neighbourhood, and rents are at once raised, out of all proportion. My contention was that past laws and conditions have favoured the creation of large holdings, and thus indirectly helped to drive labour townwards. Large holdings cannot afford to pay high wages; for intensive cultivation, wherever you find it, has to pay these higher wages, and then the labourers do not go to the towns to the same extent, and fewer still would go if they could purchase their own holdings. Did "D. C." ever hear of a man owning and working three or four acres who left it to better himself in a city? There must be something strangely wrong if, as "D. C." says, men leave the land—the first source of production—to avert starvation. It would not be safe to offer free land near here. I cannot speak for other parts, and it has to be very foul and very poor to be had rent free for even six months. I quite agree as to the difficulties of distribution when distant from any outlet. I can give no figures to prove that small holdings *do* pay, nor do I believe that any are needed. I live in the midst of it, see it spreading every year, and paying quite double farmer's rent and higher wages, and so am convinced that it *must* pay. That it would thrive equally in every part of England is my firm belief; but you must have the right men, as I said before, and they can only be produced gradually. Thanking you for your kind allowance of space, on which I shall not again encroach, I am, &c.—OWNER AND TENANT.

P.S.—Would "D. C." explain why Henry George's philosophy would, if practically applied, tend to national suicide?

ENTERING A HOLDING OF SIXTEEN ACRES.

Writing in reply to a query in "Farm, Field, and Fireside," a correspondent signing himself "Wentworth," says: "If there is still money to be got from the source from which you acquired the £200 you have to start your farming with, stick to it, for you will never keep a wife and family and save £200 out of farming sixteen acres of land in West Yorkshire, when devoting your energies principally to summer butter making. In an issue of the 'Mark Lane Express' there appears a letter from Mr. Clare Sewell Read on 'Co-operation Among Farmers,' and he quotes the caution of the late Charles Howard, 'That the only way for a small farmer to command success was to do the work of two labourers and live at the expense of one.' This is quite our experience, and this is the sort of life that the small holder has got to be prepared for. One of your proposals, on the strength of your wife being a good butter maker, is to purchase four cows at their second calf in May, and get your butter in the summer, as you do not think it pays to make butter in the winter. This argues more faith than experience. It does not pay to make butter in the summer, and least of all from ordinary second calf cows, unless it can be sold at top prices to private consumers. We have seen in Yorkshire markets, in Otley, Ripon, and Knaresborough, butter sold at 8d. per roll, and a roll of butter in Yorkshire is a pound and a half. Can that pay? Unless a man works for a larger farmer, and slaves

at his small holding after his day's labour, and between times, or unless it is situated near a town, and is cultivated principally as a market garden, and all produce—vegetables, butter, poultry, eggs, pigs, &c.—is sold at retail rates, there is no "living" for a man and his wife and family off sixteen acres of land. It is slavery and semi-starvation. It would pay better to rear and sell fresh calves, in view of the demand for such by Lancashire milk sellers in West Riding markets than to make butter under the conditions described, and it would pay better to follow your present occupation, or seek almost any other than a farmer of a small holding."

If this is reliable advice, it contains a serious warning. Another writer to the same query says: "Selling farrows of pigs at eight or ten weeks old will be sure to pay you. Better to hire horse work done. Fields that are grazed will not need dressing, but the mowing ground will. Good extra foods for butter production are oats, bran, maize, meal, brewers' grains, cotton cake, linseed cake, carrots or parsnips, and mangold; the latter at spring, but, of course, not much, if any, of this kind of dieting is needed in summer time."

Jottings on the Holland House Floral Pête.

Doubtless the readers of our Rose Journal will have a full account of the splendid exhibition of the Royal Horticultural Society's exhibition held last week in the lovely and extensive grounds at Holland House, generously lent by the Earl of Ilchester. It is the humble object of your correspondent to confine his few remarks to the Rose division. Regretfully, but not, as a matter of surprise, he is obliged to come to the conclusion that the Roses, neither in numbers or quality came up to the mark or were worthy of the occasion. Thirteen frosts, consecutively, up to April 27 one has only to mention as the chief reason. Nevertheless, among the blooms staged many were exceptionally fine. Of the two new light Roses, a snow-white H.P., Frau Karl Druschki ("made in Germany") and H.T. Mildred Grant (Dickson, Belfast), collections of twelve, each of which created so great a sensation at the Hereford and West of England Rose show last year—the former was badly shown, the latter by a superb specimen in Messrs. Frank Cant and Sons' first prize collection. There is evidently a great future for both these varieties, one professional exhibitor expressed his intention of working 10,000 on the Briar of Frau Karl Druschki, so highly did he think of it. Probably from its strong growth—like H.P., Her Majesty—this variety will do better on "cut-backs."

In the first and second prize Colchester collections (forty-eight varieties) the following blooms were admirable:—The new Rev. Alan Cheales (globular, very good), Comtesse de Ludre (splendid), Margaret Dickson (large, without coarseness), Caroline Testout exquisite (a variety supplanting La France as a breeder), Dr. Sewell (superb colour), W. F. Bennet (plum coloured), Marchioness of Downshire (fine, exquisite in several collections), and the new President Carnot (fine, with high centre), Lady Roberts (new and promising, but shown coarse), Ulrich Brunner (magnificent), Captain Hayward (grand colour, generally bad traveller, but here wore well), Frau Karl Druschki (badly shown), Marchioness of Lorne (finely cupped, very promising), Mrs. J. Laing (superb, as usual), Mrs. Rumsey (good), Duke of Edinburgh (grand in size and colour), and Lady Battersea (useful colour, evidently not shown in form).

Messrs. Prior had a nice first prize collection of eighteen Teas, chiefly noticeable: Madame Hoste, Souv. de S. A. Prince, and Catherine Mermet (fine blooms); while in Messrs. Prince, Oxford, the new Tea, Souvenir de Pierre Notting was admirably shown, and will be a great acquisition. Neither this celebrated firm nor my friend and late neighbour, Mr. Burnside, seem to have as yet overcome the delays and difficulties of the season. As regards the new dark H.P., Edward VII., from specimens sent both in a cut and growing state, it is premature to decide; the habit of growth is first rate, but whether blooms will not be rather obtuse in petal, and pretty but lacking in size, remains to be seen; the colour is rich and good.

Messrs. Hobbies staged Rambler Dorothy Perkins to great advantage. This novelty was universally admired for colour and freedom of blossom and growth.—HEREFORDSHIRE INCUMBENT.

Slugs and Orange Peel.

In regard to your par re above in "Our Journal" of June 25, I have tried it on several occasions with great success. I have also found that Lemon peel is just as efficacious. Having caught scores of slugs in this manner I would recommend all gardeners who are troubled with the pest to give this simple remedy a trial.—E. M. E., West Kensington.

Societies.

Yorkshire Gala, June 24th, 25th, and 26th.

This exhibition, the forty-fifth in succession, was held in Bootham Park, York, on June 24 and two succeeding days. The exhibits this season were slightly fewer than usual, owing to the very untoward season, but the show was still most attractive, and on the opening day was favoured with ideal weather. Arranged in five large tents opening into one another, the show was a most effective one, and arranged in such a way as to reflect much credit on the management, and especially to the exertions of Mr. Fred Arey, the energetic and courteous secretary, who did everything possible for the convenience of exhibitors and competitors.

Plants.

Groups.—The leading feature of the plant classes was the competition for groups, the prize being for a group of plants in or out of bloom, arranged for effect, space not exceeding 300 square feet. There were five competitors, all of very equal merit, and all most meritorious. The designs of the whole were most similar, differing only in detail, and while all had grace and effectiveness, it is regrettable that in every case the same general plan was followed, and it is to be hoped that the limit of design in plant arrangement has not been reached. The plants used, generally speaking, were of much merit. Palms were in fine health and appropriate in size to the general design. Crotons were beautifully coloured. Variegated Abutilons were most graceful and effective; *Acalypha tricolor* was also prominent and beautiful among flowering subjects. *Lilium longiflorum* was largely in evidence, and several of the groups were rich in cut stems of *Odontoglossum crispum*. The judges had a hard task in deciding, where all were good, and spent a very long time over their task, the first prize being eventually awarded to James Blacker, Esq., Selby (gardener, Mr. W. Curtis); second, Mr. J. S. Sharp, Almondbury, Huddersfield; third, Messrs. Artindale and Son, Sheffield; and fourth, E. B. Faber, Esq., M.P., Harrogate (gardener, Mr. W. Townsend).

SPECIMEN PLANTS.—In the open classes for twelve, six, and three plants in bloom, Messrs. Cypher and Son, Cheltenham, were easily first with beautiful examples from their well-known collections, prominent being beautiful plants of *Statice intermedia*, *Ixora Williamsi* and *salicifolia*, *Bougainvillea Cypheri*, *Ericas Bothwelliana* and *Candolleana*, *Dracophyllum gracile*, &c. Col. Harrison, Broadley, was second, for twelve plants, and was the only exhibitor for six specimens open to amateurs only. For one specimen greenhouse plant (open) there were ten entries, the first prize again going to Messrs. Cypher with a grand specimen of their *Bougainvillea*. In the classes for fine foliaged and variegated plants, Messrs. Cypher held leading position, with fine, healthy, well-cultured specimens, their Crotons being very rich in colour. Messrs. Sharp and A. F. Faber were also very meritorious exhibitors in these classes.

ORCHIDS.—Of these there was quite a brilliant display, which formed a most attractive feature of the exhibition. In class 19, for table of Orchids arranged for effect, either dwarf plants, cut blooms in glasses, or baskets admitted, there were two entries. Messrs. Cypher and Son gained the first prize with a very rich and massive exhibit, containing beautiful examples of *Cattleyas*, *Cypripediums*, *Odontoglossum crispum*, *Brassavola Digbyana*, &c. The arrangement of this was very fine, but slightly heavy. Mr. John Robson, Altrincham, was second with a very elegant exhibit of similar sorts. Some onlookers favoured this exhibit for first prize, but elegance had to give place to massiveness. For ten specimen Orchids, Messrs. Cypher were easily first with very fine plants, chief among them being *Cattleyas Warneri*, *Mossiae*, *gigas*, and *Mendeli*, *Brassavola Digbyana*, *Laelia tenebrosa*, *Odontoglossum citrosinum*. Mr. Robson was again second, and W. P. Burkinshaw, Esq., third. For six Orchids and three Orchids Messrs. Cypher and Mr. Robson were again first and second respectively. In the amateur classes for six and three Orchids the first in both cases was gained by Walter Bateman, Esq., Leeds (gardener, Mr. J. Rollison); and second W. P. Burkinshaw, Esq., Hull (gardener, Mr. Barker). For four Orchids (Messrs. Backhouse's prize), Mr. Burkinshaw was first and Mr. Bateman second.

PELARGONIUMS.—For Zonals and Ivy-leaved varieties there were good competition, but the classes for stage Pelargoniums, which used to be a great feature at York shows, did not fill. The bank of Zonals were an effective blaze of colour, but the plants grown on the flat pancake system with blooms all tied to a uniform level, we did not admire. The leading prizes were gained by Mr. Henry Pybus, Leeds, and Mr. J. Sunley. The Ivy-leaved varieties were more naturally grown.

BEGONIAS.—There were six groups, 12ft by 5ft, interspersed with foliage plants; these were pretty and effective. Mr. F. Styan, York, gained first prize with a very pretty exhibit of choice blooms, Miss Wharton was second, and Messrs. Walshaw and Son third. There was also a good competition for eight specimen Begonias.

Groups of Carnations were well shown, Malmaison varieties

being much in evidence. Mr. Robson was first, Mr. Barker (gardener to the Duke of Newcastle) second, and Messrs. Walshaw third. There were good classes for groups and specimens of Fuchsias (very good), Gloxinias, Calceolarias. The prize for group of Cannas had only one entry, Messrs. Walshaw, but they were very creditable and showy. Ferns and table plants were well shown.

Roses.

Great hopes were expected this season of a fine display of Roses, and most liberal prizes were offered, but the season proved so bad that the efforts of the committee were practically abortive. Both southern and northern growers were disappointed, those in south preferred to exhibit at Holland House, while northern growers had none to show. For groups of Rose plants there were three fair collections, arranged too closely to show well. Mr. Pybus, Leeds, was first, and Mr. Hutchison, Kirbymoorside, second.

In the cut bloom classes Mr. Geo. Mount, nurseryman, Canterbury, saved the Rose section from failure, and took the first prizes for seventy-two blooms, also for forty-eight, thirty-six, twenty-four, and eighteen blooms. His blooms generally were not large, but fresh and well coloured, the most prominent varieties being Ulrich Brunner, Liberty, Général Jacqueminot, Captain Hayward, Mrs. W. J. Grant, Mrs. John Laing, Mrs. Sharman Crawford. Messrs. Harkness and Co., Hitchin, were second in these classes with blooms much below the first prize stands in quality. Among other

Cut Flower Classes.

those for hardy border flowers were most prominent, and were a leading feature of the exhibition. For collection of hardy cut flowers, 15ft by 6ft, Messrs. Harkness, Bedale, were first, Messrs. Gibson and Co., Leeming Bar, second, and Messrs. Harkness and Co., Hitchin, third. These were most effective exhibits, containing the leading hardy flowers now in bloom: Pyrethrums, Iris, Poppies, Campanulas, Heucheras, Pæonies, &c. For twenty-four bunches hardy flowers Messrs. Gibson were first, and the two firms of Messrs. Harkness second and third. For twelve bunches hardy flowers (amateurs) good exhibits were from Mr. Hutchinson, Mr. McIndoe, and Mr. Whitehead.

Sweet Peas had only two exhibits for twelve distinct varieties—both very good. Mr. Geo. Cottam, Cottingham, was first with very good examples, the most prominent being Gorgeous, Aurora, Countess of Radnor, Lovely, Blanche Burpee. Mr. McIndoe was second.

Bouquets and Floral Decorations.

In the bouquet classes the veteran prizetakers, Messrs. Perkins and Son, of Coventry, had a very easy task, capturing all the first prizes in a walk. The two bride's bouquets were exceedingly elegant with their wealth of Alexandra Orchids. The pair with *Odontoglossums* and *Cattleyas* were also very beautiful. Messrs. Artindale and Son, Sheffield, had all the seconds; their bouquets were composed of fine flowers, mostly Orchids, but sadly lacking in artistic finish; some of them so unfinished in the handles that they should hardly have been admitted to the prize list. Competitors should bear in mind that an unfinished bouquet is not a bouquet. For baskets of flowers Messrs. Perkins were again easily first, the basket of Roses being a dream of fragrant beauty. Messrs. Artindale were again second, their baskets showing the same faults as their bouquets. For a table of floral designs there was only one entry, which was very flatteringly dealt with when the judges awarded it a second prize. A vase or epergne for decoration of dinner tables brought out five competitors, Miss Ada Stanley, Didsbury, getting first award with an elegant and certainly simple arrangement of Iceland Poppies and Gypsophila.

Fruit and Vegetables.

The principal prize was that for a decorated table of ripe fruit, not to exceed fourteen dishes, or have less than ten. For this there were five competitors, and as they were all highly meritorious and beautifully decorated, they formed both a pleasing and important feature of the exhibition. As the judging was by points, to be placed on each exhibit, the judges spent a long time over the different exhibits before making the final awards. The first prize was awarded to Lord Barnard, Raby Castle, Darlington (gardener, Mr. J. Tullett), with a total of 104 points—82 for fruit and 22 for floral decoration. Mr. Tullett had very handsome, well-finished Hamburgh Grapes, a beautiful Pine, two Melons, splendid Nectarines, good Peaches, Figs, Apples, &c. The second place was awarded to the Earl of Harrington (Mr. Goodacre, gardener), Elvaston Castle, with a total of 99 points—75 being for fruit, and 24 for flowers (the maximum). Black Grapes were very fine. Hale's Early Peach and Early Rivers Nectarine were also choice. Third place fell to Mr. J. McIndoe, Hutton Hall, with 91 points—76 for fruit and 15 for flowers. Mr. Dawes, gardener to the Hon. Mrs. Ingram, had also a very meritorious table, the floral decorations being, perhaps, the finest of the lot, and more nearly approaching the decoration of a real dinner table in contrast to one for exhibition—one or two tables being slightly overdone. Mr. Dawes' centre of Alexandra Orchids were, perhaps, the finest thing in the show.



Tea-scented Roses. (See page 4.)

For the collection of ten kinds Lord Barnard, Raby Castle, was again first; second, the Hon. Mrs. Ingram (Mr. Dawes, gardener); and Mr. Corbett, Droitwich (gardener, Mr. Jordan), third. For collection of six dishes, first prize was awarded to Lady Beaumont, Carlton Towers (Mr. W. Nichols, gardener), for a very fine exhibit, the Grapes being very good indeed. Second, Mr. Corbett; and third, Earl of Lonsborough, Market Weighton (Mr. J. McPherson, gardener). For four dishes, Lord St. Oswald, Nostel Priory (Mr. J. Easter, gardener), was first, Earl of Lonsborough second, and Mr. J. McIndoe third.

Other fruit classes were well competed for, notably that for three bunches of Black Hamburg Grapes, there being no fewer than twelve entries, the prizes were as follows:—First, the Duke of Newcastle (gardener, Mr. S. Barker), Clumber; second, Lady Beaumont; third, A. Wilson, Esq., Tranby Croft (J. P. Leadbetter, gardener); fourth, Lord St. Oswald—the quality of these was very superior.

VEGETABLES.—There were only two classes for vegetables, the prizes being offered respectively by Messrs. Sutton and Sons, Reading, and Messrs. Webb and Sons, Stourbridge; the first and second prizes being in each case gained by Lord Aldenham, Elstree, Herts (Mr. Beckett, gardener), and the Earl of Lathom, Ormskirk (Mr. Ashton, gardener), the quality of the whole was good; but these special prizes tend to narrow competition.

Non-competitive Exhibits.

The trade made a good display, a number of most interesting exhibits being made, though in some seasons the nurserymen have been forward in larger numbers. The largest group was from the well known nurseries of Messrs. Smith and Co., Worcester, and contained some beautiful specimen Clematis, a great speciality with this firm; they had also a large collection of miscellaneous house and hardy plants, and a showy and interesting collection of cut hardy border flowers; a gold medal was awarded.

Messrs. Kent and Brydon, Darlington, exhibited a very handsome and well arranged collection, prominent among which were pretty and effective masses of Verbena Miss Willmott, Gladiolus The Bride, Malmaison Carnations, Hydrangeas, Rhododendron John Walter (very bright). A special gold medal was awarded.

Messrs. Mack and Miln, also of Darlington, had a very effective group containing many interesting plants, but specially prominent were Malmaison Carnations, Kalosanthes, Abutilons, Dracenas, &c., beautifully set off with choice Bamboos and Palms. Gold medal was awarded.

Messrs. Wm. Clibran and Son, Altrincham, had a small but beautiful group containing many interesting plants of a newer and rarer description, including Kalanchoe flammea, Verbena Miss Willmott, new blue Marguerite Dimorphotheca Eckloni, the Old Man Cactus, Crossandra undulifolia, Asparagus myriocladus, Eucharis Clibrani, Lobelia Mrs. Clibran, &c. Silver medal.

Messrs. Dicksons, Limited, Chester, had a large and beautiful display of hardy cut flowers, containing Ixias (very handsome), Pæonies, Iris, Poppies, Anemones, Heuchera micrantha, Lilium rubellum, &c. Gold medal awarded. Messrs. W. and J. Brown, Stamford, a table of miscellaneous flowers, among which bedding Cactus Geranium Fire Dragon was prominent (very bright in colour and dwarf in habit). Messrs. Cutbush and Son, Highgate, had a group of new white Anemone-flowered Marguerite Coronation, which has a very handsome appearance. Messrs. Waltham, Scarborough, showed a group of their new yellow Marguerite Golden Sun, which blooms very freely and has a good branching habit; Heliotrope Lord Roberts was also good in this exhibit.

A most interesting exhibit was made by Geo. Yeld, Esq., of hybrid and cross-bred Iris and Hemerocallis, many of which were very beautiful and attracted great attention from plant lovers.

Messrs. Reamsbottom and Co., King's County, Ireland, made a very beautiful exhibit of their famous strain of St. Bridgid Anemones, for which they were awarded a gold medal.

First-class certificates were awarded to Mr. Brotherston, gardener to F. A. E. Sanderson, Esq., Brackenbrough Hall, for a very handsome terra cotta Carnation Francis Samuelson. This seems a most promising variety, possessing nearly all good points, with a most attractive colour. Also to W. P. Birkinshaw, Esq., for a seedling Thunia.

Royal Horticultural, June 25th and 26th.

The second summer show held at Holland Park, by kind permission of Earl and Countess Ilchester, was successfully recorded on Thursday and Friday of last week. The weather was typically that of summer, and large numbers of visitors attended. The gardens of Holland House were open to the public on payment of 1s. fee, the money going to the gardening charities. The show arrangements were again in the hands of the secretary, Rev. W. Wilks, M.A., Mr. S. T. Wright, Mr. Reader, and Mr. Humphreys, who were assisted by the office and garden staffs.

Orchids.

Jeremiah Colman, Esq. (gardener, Mr. W. Bound), from Gatton Park, brought a select group of Cattleyas, Odonto-

glossums, &c. His *Lælia cinnabarina* were very well flowered, and *L. purpurata* could hardly have been beaten. Messrs. Low and Co., of Bush Hill Park, Enfield, contributed *L.-c. Latona*, *Cypripedium Alice*, a lovely flower; *Dendrobium Bensoniæ xanthinum*, *Cattleya Mossiæ Reineckiana*, and other choice subjects. Messrs. B. S. Williams staged a small group, as also did Charlesworth and Co., of Bradford.

Fruit Exhibits.

Hugh Low and Co., Bush Hill Park, staged fruiting pot Vines and Figs; while Messrs. Rivers and Son had their unsurpassed trained pot Peach and Nectarine trees, and also Cherries.

An excellent Queen Pineapple came from Baron Rothschild, Hohe, Warte, Vienna (gardener, Mr. W. J. Roberts). Seedling Melons were sent up from the Swanley Horticultural College, but these were not certificated. Leopold de Rothschild, Esq. (gardener, Mr. J. Hudson), contributed Jefferson, Kirke's Transparent Gage, and the early variety of same, also Reine Claude de Comte Althann Plums, the fruits perfect, even in a bad year. A dish of Cherries came from the Countess of Portsmouth, Hurstbourne Park.

Roses.

Thomas S. Ware, Limited, brought a group of pot Roses, including Sunrise, Corallina, Bessie Brown, and a large selection of the favourite varieties in all sections.

Mr. Geo. Mount, of Canterbury, also added to the Rose display with a well grouped collection of pot plants and cut blooms, all of the leading popular sorts. Mr. Geo. Prince, of Longworth, staged Paul's Carmine Pillar Rose, Aglaia, Bellefleur, and others. Messrs. Paul and Son, of Cheshunt, had a group which included their new Lady Battersea, rugosa repens alba, Dawn (H.T.), and others. Another Rose contribution came from Chas. Turner, who had mostly standard hybrid Wichuraiana varieties, and numerous bunches of Garden Roses.

COMPETITIVE ROSE CLASSES.

The premier class for Roses was that for twenty-four single blooms, but sad to relate, there were only two entries, Mr. C. J. Salter, gardener to Mrs. Haywood, Woodhatch, Reigate, being placed first. The best varieties were Clara Watson, Crown Prince, Madame Lambert, White Lady, Captain Hayward, Cleopatra, and Madame Hoste. Mr. Alex. Hill Gray was second, relying solely upon Teas and Hybrid Teas, which were certainly below Mr. Hill Gray's average.

In the class for twelve distinct blooms there were four competitors, but Mr. O. G. Orpen, West Bergholt, Colchester, came out first. His varieties were La France, François Dubreuil, Bessie Brown, Maman Cochet, White Maman Cochet, Madame Ravary, Antoine Rivoire, Mrs. W. J. Grant, Mavourneen, Rainbow, Souvenir d'un Ami, and Madame Jules Grolez. The second prize went to Mr. S. B. Gabriel, Hart Hill, St. John's, Woking, who exhibited in much weaker form.

For six blooms of one variety there were three competitors, and Mr. Chas. Lamplough, Chatteris, Cambs., secured premier position with Mrs. W. J. Grant, which were good, followed by Mr. O. Orpen with La France, which appeared equal to the first prizewinners.

In the open class for forty-eight blooms, distinct, no less than four exhibitors faced the judges. Messrs. F. Cant and Co., Colchester secured first prize; the varieties were Oscar Cordell, Merveille de Lyon, Rev. Alan Cheales, Ulrich Brunner, Caroline Testout, Mrs. J. Laing, White Lady, Duke of Edinburgh, La France, Lady Mary Fitzwilliam, Mrs. R. G. Sharman Crawford (good), Antoine Rivoire, Liberty, Viscountess Folkestone, Marchioness of Downshire (fine), Madame Jules Finger, Marquise Litta, Frau Karl Druschki, Bessie Brown, Captain Hayward, Lady Roberts (in fine form), Baroness Rothschild, Mrs. W. J. Grant, Mrs. Rumsey, Rainbow, Exquisite, Tennyson, Mrs. J. Cocker, Souvenir de President Carnot, Chas. Lefebvre, Comtesse Beatrix de Biserat, La Frachier, Mildred Grant, Marchioness of Lorne, Margaret Dickson, Général Jacqueminot, Clara Watson, Etienne Levet, Dupuy Jamain, Lady Battersea, Rubens, Mrs. F. Cant, Marie Baumann, Charlotte Guillemot, Gladys Harkness, Madame G. Luizet, Madame Jules Grolez; and Messrs. D. Prior and Sons followed with some good representative flowers of La France, Mrs. J. Laing, Mrs. W. J. Grant, Rubens, Antoine Rivoire, and Madame Jules Grolez.

The class for eighteen single blooms of Teas and Noisettes, not less than twelve varieties, brought out two competitors, Mr. A. Hill Gray, Beaulieu, Bath, being first with a nice exhibit. His varieties were Mrs. E. Mawley, The Bride, Catherine Mermet, Comtesse de Nadaillac, Golden Gate, Maman Cochet, Medea, Hon. E. Gifford, Bridesmaid, Alba Rosea, White Maman Cochet, and Souvenir d'Elise Vardon; Mr. O. G. Orpen must have been a desperately close second, for there appeared nothing between them. His best blooms were Muriel Grahame, Maman Cochet, Souvenir de Thérèse Levet, and White Maman Cochet.

In class 6, for twelve blooms, not less than nine varieties, Mr. T. B. Gabriel was the only competitor. The varieties were Anna Olivier, Muriel Grahame, Golden Gate, Maman Cochet, White Maman Cochet, Rubens, Comtesse de Nadaillac, Niphotos, Souvenir de S. A. Prince, and Catherine Mermet.

Class 7 was for six blooms, one variety, and there were three entries. Mr. O. Orpen taking first prize with a good box of White Maman Cochet, the Rev. F. R. Burnside, Great Stanbridge, was second with Souvenir d'un Ami.

For eighteen single trusses, distinct, there were two competitors; Messrs. D. Prior and Son leading with a strong exhibit. The varieties were Souvenir de S. A. Prince, Cleopatra, Marie Van Houtte, Princess of Wales, Niphotos, Medea, Bridesmaid, Princess Beatrice, Luciola, Comtesse de Nadaillac, Devonensis, Catherine Mermet, The Bride, Anna Olivier, Madame Hoste, and Empress Alexandra of Russia. Mr. Geo. Prince was second with nice blooms of Comtesse de Nadaillac, Souvenir de P. Notting, and The Bride.

For eighteen bunches of Garden Roses Mr. O. G. Orpen was the only competitor: his varieties were Claire Jacquier, Reine O. de Wurtemberg, Stanwell Perpetual, Marie Pavie, Hebe's Lip, The Garland, Double Blanc de Coubert, Mavourneen, Madame Plantier, Laurette Messimy, Wichuraiana, Gardenia, Lady White, Alistair Stella Grey, Janet's Pride, Fimbriata, and Bardou Job.

There were three competitors in class 10 for twelve bunches of Garden Roses; Messrs. Paul and Son, Cheshunt, being first with Souvenir de C. Cochet, Madame G. Bruant, Rose Apples, Conrad F. Meyer, Madame Chas. Wroth, Mikado, Blanche Double de Coubert, Rugosa Alba, Rugosa, Mrs. A. Waterer, and Austrian Copper. Messrs. F. Cant and Co. followed with a weaker display, the best being Madame G. Bruant, Fimbriata, and America.

The class (9B) for thirty-six bunches of Garden Roses made a fine display. There were three entries, and Messrs. F. Cant and Co. proved the winner with a really fine exhibit. The varieties were Dundee Rambler, Reine O. de Wurtemberg, Lucida plena, Harrisoni, Bardou Job, Gardenia, Madame d'Arblay, Claire Jacquier, Camoens, Marquise de Salisbury, Rosa Mundi, Una, Lady Battersea, Braiswick Fairy, Liberty, Madame C. Guinoisseau, Souvenir de J. B. Guillot, Ma Capucine, Corallina, Laurette Messimy, Rainbow, Souvenir de C. Guillot, Princess Bonnie, Madame P. Ducher, Papa Gontier, Hebe's Lip, Léonie Lamèsch, Madame J. Grolez, Cecil Brunner, Fabvier, Madame Falcot, Marguerite de Simone, Raoul Chauvry, Madame L. Poncet, Gustave Regis, and Common China. The second prize fell to Messrs. B. R. Cant and Sons, Colchester, whose best bunches were Grace Darling, Souvenir de Catherine Guillot, Madame P. Ducher, Papa Gontier, and Lady Battersea.

There were five entries in class 11 for twelve bunches of single Roses, Messrs. B. R. Cant and Sons, Colchester, being placed first with a good level exhibit. The varieties were Amy Robsart, Carmine Pillar, Flora McIvor, Jeannie Deans, Macrantha, Brenda, Meg Merrilies, Rugosa alba, Janet's Pride, Anne of Geirstein, Lord Penzance, and Anemone; while Messrs. F. Cant and Co. followed with a good exhibit, and Messrs. G. Cooling and Sons, Bath, third.

Messrs. F. Cant and Co. were the only exhibitors for nine bunches of Roses, and were awarded first prize. The varieties were Common China, Fellenberg, Laurette Messimy, Madame E. Resal, Irene Watts, Queen Mab, Antoine Guillerat, Cramoisie Supérieure, and Mrs. Bosanquet.

For a bowl of Roses Miss B. Langton, Raymead, Hendon, secured premier honours with a fine bowl of Carmine Pillar. Mr. O. G. Orpen was second with a beautiful arrangement of pink and yellow Roses.

For a representative group of Roses in a space not exceeding 200 square feet, three competitors came out, Mr. Chas. Turner, Slough, being placed first with a good free arrangement. The large specimen plants of Alberic Barbier and Auguste Barbier were hardly forward enough, otherwise they were effective, the front being composed of large bunches of Hybrid Perpetuals, Teas, singles, and others.

Messrs. Paul and Son, Cheshunt, were a good second, the best features being large flowering growths of Rugosa repens alba, splendid bowls of Lady Battersea, Tea Rambler, and Carmine Pillar. Mr. Geo. Mount, Canterbury, was third, having bunches of Tea Roses for his best feature.

Hardy Florists' Flowers.

Mr. Vincent Slade, Staplegrove Nurseries, Taunton, Somerset, made a fine exhibit of single flowered Zonal Pelargoniums staged in large trusses. Seventy-two varieties of single and doubles were here presented. Of the singles the finer were Mark Twain, Lady Mary Beton, Midsummer, Mary Hamilton, Mr. T. E. Green (brilliant orange-scarlet), and Lady Curzon (a soft blush-peach). The doubles were all good.

Sweet Peas were beautifully staged by Jones and Sons, of Shrewsbury, the collection being quite a large one, the flowers loosely arranged in glasses varying in sizes from 5in at the front to 12in at the back; but Spanish Irises were arranged on the raised back line. About twenty trusses with own foliage were in each glass, and the long table had three stages covered with a white cloth. Their Irises were really a beautiful show alone, having a few Grasses (only a few) for effect with the flowers. Mr. Charles Turner, Slough, had a collection of Pinks.

The contribution of tuberous Begonias from the famous Yeovil Nurseries of B. R. Davis and Sons, showed plants of very great vigour, carrying an abundance of extra large flowers, many of

them of excellent form. We may name such singles as Grandis (orange-red), Diadem (really a semi-double, a magnificent and strong flower, with wavy segments and deep crimson colour), and Rugosa (a pretty rose-carmine). The doubles were Professor Lanciani (good form, smooth, large, and of a bright salmon scarlet), Mrs. Hebler (medium size, but excellent form, bright rose-pink), Madame Gautier (carmine), Mrs. Portman Dalton (white, suffused rose), and Marchioness of Bath (pure white, and very free flowering).

Blackmore and Langdon, Twerton Hill, Bath, had very fresh flowers, with excellent healthy foliage, dwarf close habit, and grand flowers. Our choice of the doubles fell on M. J. Desloges (a bright salmon-pink), Mrs. Heathcote (yellow, but is faulty at centre), Marchioness of Bath (a pure white), Vulcan (a strong and perfectly formed deep scarlet-crimson), Seagull (the best of the all whites), and lastly, the General (a monster sized orange-crimson).

Messrs. Peed and Son's Gloxinias from their Nurseries at West Norwood, London, were admirable in all respects, and a few named varieties were amongst those staged. Howard Peed, with white edge and crimson-rose within, is a grand flower, while the large-flowered violet-purple Empress of India is another good sort. Duchess of York is violet speckled, C. Young is an intense glowing crimson-scarlet, and Mrs. John Peed has a white throat and lavender-violet edge.

Messrs. Cannell had their Cannas from Swanley. Of these we would name Aurore (a rich orange-red), Oscar Bannaker (a dazzling, golden-red, with rich yellow edge), Elizabeth Hoss (yellow, speckled over with crimson), Black Prince (deep crimson), and Miss Florence Panwels (crimson-scarlet).

Mr. J. Forbes, Hawick, Scotland, made a novel exhibit of Pentstemons, Antirrhinums, and Phloxes in pots. The latter were especially charming, the colours being bright and clear; the best were Lord Rayleigh, Coquelicot, Eden, W. Ramsey, Mount Sully, and Aurora. The Pentstemons were very tall and would have been more effective on the ground, but the strain is undoubtedly one of the very finest at the present day. The best were Wm. Robb, Jules Barbier, Mrs. Irvine, Phryne, and Mrs. Forbes.

Messrs. Dobbie and Co., Rothesay, made a large display of Aquilegias, Pansies, Violas, and cut Regal Pelargoniums. The Pansies were in grand condition; most noteworthy were Nellie Meikle, Mrs. R. Fife, Mr. Chas. Stirling, and R. C. Allen; while the most striking Violas were Meteor, Mrs. J. McCrae, Ophelia, Mary Robertson, General Baden-Powell, and Saturn. The Pelargoniums were exhibited in large loose bunches and were effectively arranged.

Messrs. B. S. Williams and Son, Upper Holloway, made a nice display of Spanish Irises in great variety, Delphiniums, and a few other hardy flowers; mention must be made of some splendid pots of Verbena Miss Willmott.

Messrs. Paul and Son, Cheshunt, presented a fine table of Pæonies, the blooms were large and bright; a few were Duchesse de Nemours, Felix Crousse, La Perle, and Boule de Neige. A collection of variegated foliage trees and shrubs was most interesting, the remainder of the exhibit being composed of hardy flowers which were staged in large effective bunches.

Pæonies were the chief feature from G. Jackman and Son, Woking, though the firm staged a fine collection of hardy flowers, which included some fine Delphiniums, in which were D. nudicaule, Kalmia myrtifolia, and a beautiful form of Cypripedium spectabile, besides a number of rock and alpine plants.

From Messrs. W. Cutbush and Son, Highgate, came a fine collection of Carnations arranged loosely in vases, the background being composed of Palms and Veronica amethystinum. A few of the best Carnations here were Don Juan, Lady Wolverton, Bridesmaid, Lady Grimston (in grand form), Nautilus, G. B. Bryant, Herbert J. Cutbush, Baldwin, and Robin Measures. The same firm also occupied the entire side of one tent with a miscellaneous display. The Lantanas, in 5-inch pots, being well flowered, the bronze, yellow, and white being good. Some fine plants of Boronia elatior, Ericas Bothwelliana and translucens were also shown, while Verbena King of Scarlets was very bright, as was also Miss Willmott. The new Marguerite, Coronation, was much in evidence. Kalosanthes in variety. Oranges, carrying a fine crop, in 5-inch pots, with a few Begonias, completed a grand display.

Mr. A. Perry, Winchmore Hill, made a very large display of hardy flowers, with a fine exhibit of water plants and Nymphæas; in the former the best were Heuchera sanguinea, Walker's variety. Papaver Novelty, English Irises, Ixias, Tritomas, Gaillardias in variety, Anemones, and Ranunculi were charming. The water garden was most refreshing after the gorgeous display of bloom. The quaint Pontederia crassipes attracted much attention, the whole being naturally arranged, even to fish, salamanders, snails, and so on.

Messrs. Jas. Veitch and Son, Limited, Chelsea, confined their efforts to a nicely arranged table in No. 2 tent. The chief features were Lobelia tenuior, Rehmannia angulata, Corydalis thalictrifolia, some splendid plants of Kalanchoe flammula and K. Kewensis, also a beautiful strain of Streptocarpus.

Messrs. W. Bull and Sons, Chelsea, made an effective display

of English and Spanish Irises, with a few Anemones; the yellow and blue looking well in their green setting.

Messrs. Hobbies, Limited, Dereham, staged a large table of Roses, Carnations, and Violas. The Roses were beautifully arranged, Dorothy Perkins and Crimson Rambler excellent, being perfect masses of bloom. The Malmaison Carnations, arranged in fern, were also attractive. The Sweet Peas were beautifully staged and well grown, the best bunches being Miss Willmott, Lord Rosebery, Dorothy Eckford (grand), Prince of Wales, Countess Cadogan, Aurora, George Gordon, Othello, Gracie Greenwood, and Jeannie Gordon. A fine exhibit of *Lathyrus grandiflorus albus* completed the display.

A refreshing exhibit was that staged by Mr. C. Dixon, gardener to the Earl of Ilchester, Holland House, which was composed of a group of Succulents of various ages raised from seed, and backed with some fine plants of *Asparagus Sprengeri*.

From Mr. G. Reuthe, Keston, Kent, came a nice exhibit of hardy flowers, a few spikes of *Eremuri* attracting much attention; the best were Mrs. Reuthe, a pale sulphur, Aurora, Warei, and Robustus. Iris Susiana, *Cypripedium spectabile*, and a nice collection of *Ixias* were also noted.

Tree Carnations were exhibited by Mr. A. F. Dutton, Bexley Heath. The blooms were displayed in large glasses and were beautifully grown. The varieties were Madame Melba, Royalty, Mrs. T. W. Lawson, and G. H. Crane.

Messrs. Storrie and Storrie, Dundee, exhibited a beautiful strain of *Streptocarpus*, which consisted of a great variety of colours. The Iceland Poppies included many new shades which are sure to become popular. A few single Begonias arranged in Maidenhair Ferns were decidedly good. Mr. J. Robson, Altrincham, sent a fine basket of *Dianthus Napoleon III*. Mr. J. R. Box, Croydon, arranged a natural rockwork in the ground. The chief features were the Sedums and Sempervivums.

A pleasingly arranged collection of hardy flowers, most of them such as are not found every day in gardens, was staged by the Misses Hopkins, of Knutsford, Cheshire. Leopold de Rothschild, Esq., sent his blue Water Lily.

Barr and Sons, of King Street, Covent Garden, were very strong in this, their section. Spanish Irises were admirable, and of these we will name Blue Stone (dark blue), The Moor (dull bronzy purple), Panorama (clear yellow), Princess Ida (tea, with primrose lip), Helene (lavender-violet, with orange blotch on lip), California (golden), Golden King (very rich), Snow Queen (white, with yellow blotch), Vasco de Gama (a beautiful combination of golden-yellow and purple), also Thunderbolt (bronzy-brown and purple-violet). They also had tufted Pansies, named *Ixias*, some beautiful Gladioli, of The Bride type, the best being Ne Plus Ultra (carmine with white dash on lower segments), Pink Perfection, and Peach Blossom. Their *Kämpferi* Irises were a treat in themselves, and with these were *Pæonies*, *Delphiniums*, *Lilies*, &c.

Messrs. Geo. Bunyard and Co., of Maidstone, had a seasonable collection, including *Francoa appendiculata* (mauve-white), and the semi-double white pyramidal *Campanula Moerheimi*.

Mr. M. Pritchard, Christchurch, Hants, was represented by a select collection of the best flowers of this period, but rather tightly staged. Another group, edged with cork bark—a great improvement—came from Mr. W. B. Child, Edelweiss Nurseries, Acock's Green, whose varieties were absolutely the choicest the hardy plant border affords. He had *Campanula persicifolia*, Daisy Hill, a double deep lavender; *Achillea serrulata*, W. B. Child, with dazzling white, loose umbels; *Incarvillea Delavayi*, *Brodiaea laxa*, *Libertia formosa*, and *Meconopsis cambrica plena aurea*, a glowing mass of orange-scarlet. Mr. R. C. Notcutt, Woodbridge Nursery, Woodbridge, contributed, in his group, *Papaver nudicaule alba*, *P. n. aurantiaca* (a beautiful thing), single *Pæonia Leander* (rose-purple), *Dianthus cruentus*, *Delphinium Monarch*, and *Geranium ibericum*.

The long-spurred *Aquilegias* from Messrs. Cannell had suffered from the rain, but they were well staged. *Pæonies* and *Delphiniums* were liberally staged from Kelway, of Langport, but their method of staging the lovely *Pæonies* calls for protest, a protest we have hitherto mildly advanced. The visitors as well as the firm are the losers from poor staging. Amongst the *Delphiniums*, a new primrose yellow—Beauty of Langport—calls for attention, and we may also name Coronation, Albert Edward, Rev. W. Wilks, Lord Hawke, F. Carr, and Captain Lambton as good sorts.

Messrs. Ware, Limited, were also represented by a formidable array of cut hardy flowers, and here was staged the double Rocket, Poppies galore, *Ornithogalum pyramidalis*, *Gillenia trifoliata*, *Sempervivum triste* bicolor, with columnar spike, *Primula capitata*, *Ostrowskia magnifica alba*, *Romneya Coulteri*, *Hypericum gracile*, and other choice subjects.

Stove and Greenhouse Plants.

Messrs. J. Veitch and Sons, Ltd., Chelsea, had a large collection of varied stove and greenhouse plants, including masses of their hybrid Javanese *Rhododendrons*, Orchids, Malmaison Carnations, *Caladiums*, *Davallia tenuifolia* Veitchiana, *Nidularium splendens* (a Bromeliad), *Leea amabilis splendens*, *Nepenthes*, *Anthuriums*, *Crotons*, *Cannas*, and *Lilium Henryi*. No

other group was so effectively arranged, and to Mr. Tivey great credit is due in this respect.

The new *Asparagus myriocladus*, together with *Eugenia myriophylla* and *Crotons* came from the Ranelagh Nurseries Co., of Royal Leamington Spa. Showy *Caladiums* in distinctive varieties came from Messrs. Laing and Sons, who also had tuberous Begonias, very nicely staged, with *Eulalia* here and there rising above the flowers; and at the end of the table was a collection of hardy flowers, Irises and *Saxifraga sarmentosa* tricolor superba. Their *Streptocarpus* were also very fine.

Tree Ferns, *Cordylines*, *Phoenix rupicola*, *Hydrangeas*, and varied stove subjects came from Bull and Sons, King's Road, Chelsea. The group was good, though rather compact in places. Messrs. Peed and Son again had their very fine collection of *Caladiums*; John Russell, of Richmond, sent stove and greenhouse foliage plants, and H. B. May, of Edmonton, sent a varied group of the best quality market plant subjects; while from Hill and Son, of Lower Edmonton, there was another of their renowned Fern collections. *Crotons* from Lord Aldenham's garden made a bright display.

Trees and Shrubs.

R. and G. Cuthbert, The Nurseries, Southgate, had *Rhododendrons*, *Hydrangeas*, *Gladiolus Blushing Bride* and Peach Blossom; also Ivy-leaved *Pelargoniums* and foliage plants.

A magnificent and really wonderful collection of cut sprays of hardy trees and shrubs was presented by Lord Aldenham (gardener, Mr. E. Beckett) from his private garden at Aldenham House, Elstree. One can only name a few, for a table 60ft long and 3½ft broad was entirely filled with them. We may note, then, *Berberis Fortunei*, *B. fuchsoides*, *Pyrus Fifianna*, *Ulmus glabra variegata*, *Acer platanoides Schwedleri* (red), *Syringa Emodi* (silvery beneath), *Lonicera Barberi*, *Rhodotypos kerrioides*, *Fagus sylvatica pyramidalis* tricolor, and the variegated Tulip Tree. The collection was of sufficient interest to publish the full list of the subjects shown, but time did not allow us to note them all.

Messrs. W. Cutbush and Son, Highgate, made a large display of clipped Box and Yew trees, trained in all sorts of fantastic shapes. Mr. J. Russell, Richmond, had a fine display of Ivies, both large and small specimens in capital varieties, the golden and variegated forms being especially bright.

Acers and Conifers were largely represented by Messrs. T. Cripps and Son, Tunbridge Wells. The Acers made a fine show, and the whole exhibit was well arranged.

Messrs. J. Cheal and Son, Lowfield Nursery, occupied a large space in the open air with an exhibit of coloured shrubs and trees, Conifers in variety, with a few flowering shrubs. The exhibit was pleasingly arranged.

From Messrs. J. Waterer and Sons, Bagshot, came a fine collection of Conifers and shrubs grown in pots, also a few *Rhododendrons*. The chief feature, however, were the *Kalmias*, which were in excellent condition, full of flower.

Messrs. W. Fromow and Sons, Chiswick, had a large semi-circular group of Conifers, shrubs, Acers, and similar plants, the whole being well grown and in excellent condition.

Messrs. Jas. Veitch and Sons, Ltd., Chelsea, were represented in the open air by some fine specimen Conifers and a collection of *Delphiniums*, grown in pots, in first-rate variety. They were greatly admired.

Horticultural Sundries.

The Council of the Society having allowed the sundriesmen a special tent, a large number of varied exhibits were staged, and this section is of sufficient interest to be repeated and added to.

Messrs. Wm. Wood and Son, Ltd., Wood Green, London, set up a display of garden statuary and architectural figures, such as a deerhound, lion, stork, eagle, boy, urns, vases, dials, fountains. They had also their well-known hanging flower baskets, named The King (as supplied for the King's yacht last summer), The Queen, with one suspending rod instead of three, and The Empire basket. There was a large number of samples of chemical manures, and meteorological instruments, liquid insecticides and sprayers, hose-piping, cutlery, stakes, loam, &c., and, indeed, quite a great array of most useful articles and subjects.

The Standard Manufacturing Co., Ye Olde Moat Hall, Derby, had a very embracing show of tree and shrub pruners, parasol holders, and the "Aërotor" scarifier.

From the Hull Chemical Works, Ltd., came a selection of their Bitter-oil insecticide, the fungicide and mildew destroyer, and Tala sprayer, which we noticed last week.

W. Herbert and Co., Hop Exchange, S.E., showed quite a large number of new improvements in garden appliances and sundries. The new wall clip, the sprayers and syringes, Jadoo fibre, Abol insecticide, fertilisers, &c., were on view.

Messrs. Pulham and Son, 71, Newman Street, Oxford Street, London, W., had ornamental vases, dials, and urns—a goodly selection. Mr. John Pinches, 3, Crown Buildings, Crown Street, Camberwell, S.E., had a large choice of labels, sieves, wire fences, and arches. The "Acme" bloom protector was also shown.

Ohlendorff's Horticultural Manures were displayed by the Anglo-Continental Guano Works, of 30, Mark Lane, London;



Veronica spicata. (See page 8.)

while Osman and Co., 132 and 134, Commercial Street, London, S.E., had vases, glasses, ornamental little bowls and dishes, hellebore powder, artificial flowers and dyed Pampas grass, with also a large assortment of small garden tools and sundries.

Messrs. Valls and Co., 16, Coleman Street, London, sent samples of their "Beetlecute" for exterminating beetles, cockroaches, ants, woodlice, &c. Mr. R. Sydenham, Tenby Street, Birmingham, and J. Williams, 4A, Oxford Road, Ealing, had the Rural Table Decorations, and very graceful they are.

Messrs. Champion and Co., 115, City Road, E.C., had a varied selection of well finished tubs made of oak and teak wood, smoothed and varnished outside. They are in different sizes and shapes, with bronze handles and copper rims. These tubs are highly spoken of by everyone. The Boundary Chemical Company, Liverpool, sent their Climax weed-killer, their Premier lawn and other manures, Vine dressing, quassia soap, and slug destroyer. Messrs. S. and E. Collier, Ltd., Grovelands, Reading, had pottery ware—plant pots, columns, vases, edging tiles, saucers, and, what is uncommon, clay-made baskets the same as the wooden ones, for Orchid culture. Mr. J. George, 14, Redgrave Road, Putney, S.W., contributed Orchid peat, Mushroom spawn, Lawton's patent clip for suspending pots, Nicotiana fumigator, and Thomson's Vine, plant, and vegetable manure.

The "Pattisson" lawn boots were staged by Mr. H. Pattisson, 1, Farm Avenue, Streatham, S.W. Messrs. James Green and Nephew, 107, Queen Victoria Street, E.C., staged some lovely glass vases of superior quality, in a great variety of shapes, and all of the highest excellence for decorative purposes. Messrs. D. Dowel and Son, Ravenscourt Avenue, Hammersmith, whose speciality is Orchid pots and pans, had a very wide selection of them, from the tiny thimble pots for seedlings to the largest pans. Messrs. Lee and Co., Bank Street, Maidstone, sent their fruit bottling apparatus, of which they have a full descriptive pamphlet obtainable on application. Mr. W. Bowen, Halstead, Sevenoaks, had a selection of tree poles, Chrysanthemum sticks, and other stakes, as well as charcoal and wood for rustic work. Messrs. Wm. Poore and Co., American Stove Stores, 139, Cheap-side, E.C., staged their Challenge hot-water apparatus for stove and greenhouse. These are strongly made and well finished, and very serviceable, so far as our inspection could prove, for amateurs' small houses. They had a goodly selection of patterns. Eggett and Son, artistic rock workers, Thames Ditton, sent photographs of their work. The Economic Fencing Co., Ltd., Billiter House, Billiter Street, London, sent a specimen of their fencing, made of rough trimmed chestnut spars, wound together with stout wire.

Certificates and Awards of Merit.

Begonia, The Queen (J. Laing and Son).—A lovely fringed single of good shape and habit, and prettily coloured a warm blush creamy pink. A.M.

Begonia, W. Sparkshott (B. R. Davis).—Flowers 6in across, perfectly double, with grand, solid petals, very smooth, and of an intense scarlet with a dash of orange. A.M.

Begonia, Gipsy Girl (B. R. Davis and Son).—A single crested variety, coloured a sweet rose-pink. A.M.

Begonia, Countess of Warwick (Blackmore and Langdon, Bath).—A double, and one of the richest coloured flowers up to date. The form is perfect, with a rich yellow or canary centre and orange-red edge; the variety is exquisite. A.M.

Carnation, Shiela (W. Cutbush and Son).—A border, yellow ground Fancy, flaked and bordered crimson, and of good size. A.M.

Carnation, Lady Wolverton (W. Cutbush and Son, Highgate, N.).—A good border variety of a rich rose-salmon; the flowers large and fragrant. A.M.

Cattleya Mossiae, var. Alexandrae.—Large, massive flowers, with recurving segments, which are broad, smooth, and white. The throat is yolk-hued yellow and pale mauve in front, the edge being white. F.C.C.

Cattleya × *Rohersiana*.—Parentage: Mendeli × Hardyana. Flowers white, with purple tinged sepals and petals, the front of the lip glowing crimson-purple. F.C.C.

Cattleya Warneri alba (Mons. A. A. Peeters, Brussels).—Besides receiving a F.C.C., a cultural commendation was awarded for a magnificently flowered piece of this beautiful Orchid. One lead

had fine splendid flowers, pure white except for the creamy throat to the lip. F.C.C.

Delphinium, Monarch (R. C. Noteutt, Woodbridge).—This variety has immense long spikes, dense and round. The large single flowers are nearly 2ins across, and dark purple blue. A.M.

Delphinium, Rev. W. Wilks (Kelway and Son, Langport).—A strong flowered, semi-double spike, dense and good, and flowers intense violet purple. A.M.

Eremurus × *Mrs. Reuthe* (G. Reuthe, Keston, Kent).—A hybrid between *E. Turkestanicus* × *E. Warei*. The spikes are 2ft long, 3ins in diameter, with flowers like those of a Kalmia, at least for size and shape, and of a primrose colour. A.M.

Lalio-Cattleya × *Martinetti* var. *Flambeau*.—Parentage: *C. Mossiae* × *L. tenebrosa*. A showy flower, with fringed lip, coloured bright mauve purple, and the petals and sepals are bronzy-red. F.C.C.

Lalio-Cattleya × *Martinetti* var. *ochracea*.—Sepals and petals yellow, lip rose, veined purple. A.M.

Lilium Kelloggi (Barr & Sons, Covent Garden).—Presumably a Japanese Lily with medium or small rose-purplish flowers, spotted with deep purple, and having the segments completely reflexed. A.M.

Lilium auratum platyphyllum Shirley variety.—Immense flowers, with sepals that are narrower than the type, and finely crinkled; otherwise the flowers are typical. F.C.C.

Nicotiana Sanderae.—A cross between *N. rubra* and *N. affinis*. The long branching stems bear slender tubed flowers along their length, and are coloured rose purplish. A.M.

Odontoglossum Rolfei var. *majesticum*.—Flowers are of large size and well opened, the ground colour is pale tea shade, speckled and spotted with magenta-purple. The raceme bore twelve flowers. F.C.C.

Odontoglossum ardentissimum var. *Fascinator*.—This has a large, central, shield-shaped magenta blotch on each segment, the ground being white. A.M.

Paeonia, "Dawn."—A beautiful rosy-pink, semi-double. A.M.

Papaver orientale Lady Roscoe (R. C. Noteutt, Woodbridge).—A bright salmon-scarlet with black blotches at base of petals. A.M.

Poppies (Storrie and Storrie, Dundee).—This firm showed a beautiful strain of Iceland Poppies in uncommon colours, such as pink, orange-pink, greenish-white, tea, salmon, rose, with orange reverse, milk white, and received an Award of Merit for the strain.

A Cultural Commendation was awarded to Sir William Marriott, Bart., for *Disa* × *Clio*; and to Mr. Peters for *Cattleya Warneri alba*.

Medal Awards.

GOLD MEDALS to Lord Aldenham (gardener, Mr. Beckett), Elstree, for Crotons and cut shrubs; Jas. Veitch and Sons, Limited, for choice stove and greenhouse plants, Conifers, &c.; John Russell, for stove and greenhouse plants and Ivies; T. Rivers and Son, Sawbridgeworth, for fruit trees in pots; Wm. Cutbush and Sons, for Carnations, flowering plants, and clipped

trees; Wm. Bull and Sons, Chelsea, for cut flowers and foliage plants.

SILVER CUPS to J. Colman, Esq., Reigate, for Orchids; L. de Rothschild, Esq., Gunnersbury House Gardens, Acton, for fruit; Blackmore and Langdon, Twerton Hill Nursery, Bath, for Begonias; Hobbies, Limited, Dereham, for Roses, Carnations, Violas, and Sweet Peas; H. B. May, Upper Edmonton, for Ferns and foliage plants; T. S. Ware, Limited, Feltham, for herbaceous and alpine plants; J. Peed and Son, W. Norwood, for Sweet Peas, Gloxinias, and Caladiums; H. Cannell and Sons, Swanley, for Cannas, Aquilegias; J. Carter and Co., High Holborn, for Gloxinias, pigmy trees, &c.; A. Perry, Winchmore Hill, for hardy cut flowers and aquatics; H. Low and Co., Enfield, for Orchids; Dobbie and Co., Rothesay, for Violas, Pansies, Pelargoniums; J. Hill and Son, Lower Edmonton, for Ferns; Charlesworth and Co., Heaton, Bradford, for Orchids; T. Cripps and Son, Tunbridge Wells, for hardy trees and shrubs.

SILVER-GILT FLORA MEDALS to Mr. Geo. Mount for Roses; Messrs. Barr and Sons for hardy flowers, &c.; Cheal and Sons, Crawley, for hardy shrubs and trees; B. R. Davis and Sons, Yeovil, for Begonias; Jones and Sons, Shrewsbury, for Sweet Peas, Irises, &c.; Paul and Son, Cheshunt, for Roses; J. Laing and Sons, Forest Hill, for Begonias, Caladiums, Streptocarpus; J. Waterer and Sons, Bagshot, for Kalmias and Rhododendrons; Mr. Forbes, Hawick, for Phloxes, Pentstemons; Messrs. G. Jackman and Sons, Woking, for hardy flowers.

SILVER-GILT BANKSIAN MEDALS to Messrs. Kelway and Son for Delphiniums, Paeonies, &c.; Mr. W. B. Child, Birmingham, for hardy flowers; Mr. Prichard, Christchurch, for hardy flowers; Messrs. Cuthbert and Sons, Southgate, for flowering plants; Mr. Anker, Kensington, for Cactaceous plants; Messrs. Fromow, Chiswick, for Japanese Maples and shrubs; Mr. Notcutt, Woodbridge, for hardy flowers.

SILVER FLORA MEDALS to Messrs. G. Bunyard and Co., Maidstone, for hardy flowers; Lord Ilchester, Kensington, for succulents; Mr. Iceton, Putney, for Lily of Valley, &c.; The Ranelagh Nursery Company, Leamington Spa, for foliage plants; Mr. Reuthe, Keston, for hardy flowers; Messrs. Storrie and Storrie, Dundee, for Iceland Poppies; Mr. G. Prince, Longworth, Berks, for Roses.

SILVER BANKSIAN MEDALS to Mr. J. R. Box, West Wickham, for alpine and rock plants; Mr. A. Dutton, Bexley Heath, for Carnations; Mr. V. S. Slade, Taunton, for cut Pelargoniums; the Misses Hopkins, Mere, Knutsford, for hardy flowers; Mr. R. Sydenham, Birmingham, for Sweet Peas; Messrs. B. S. Williams, Upper Holloway, for Orchids and hardy cut flowers; Baron Rothschild, Vienna, for Pineapples; Mr. Turner, Slough, for Pinks.

SUNDRIES AND IMPLEMENTS.—SILVER FLORA MEDALS to Messrs. Pulham for stone vases, &c.; Messrs. Green for glass vases; Messrs. Champion for tubs for trees, &c. SILVER KNIGHTIAN MEDALS to Messrs. Wood for sundries; Messrs. Osman for sundries. SILVER BANKSIAN MEDALS to Mr. Riley for summer houses, &c.; Mr. George for sundries; Messrs. Dowel for pottery, &c.; Messrs. Herbert for sundries; Mr. Pinches for labels; The Standard Company for pruners, &c.; Messrs. Ohlendorf for manures.

National Rose, Temple Gardens.

After a season such as the one lately passed, it is gratifying to be able even to say that the Temple Rose Show was below par, because the comparison first of all infers that there *was* a show, which, till within a few days ago, one hardly dared to expect; and secondly that it was a show at all events nearly approaching the higher standards of better years. The tents were sparsely filled on the whole, and many corners had been given over to hardy plants, Orchids, and Cannas. The Garden varieties of the Rose stood in good stead to the promoters, and the table decorations were exceedingly beautiful. Here and there throughout the show some even stands were seen, but on the whole the blooms are undersized, lacking in form, smoothness, and good rich colours. The arrangement of the tables, in continuous lines, seems unfortunate, as crossing to opposite sides can only be done by a long march round either end. The day was bright, warm, and enjoyable. No new varieties, nor any pot Roses were staged, but a new feature was the decorated arches, Class 21.

NURSERYMEN'S GENERAL SECTION.

DIVISION A., CHAMPION TROPHY CLASS (seventy-two distinct varieties).—The first prize in class 1 is a trophy, a gold medal, and £4; the second, £4; and the third, £2. Seven exhibitors were forward, and furnished a very creditable display.

The leading honours fell this time to Messrs. Harkness and Co., Hitchin, Herts, whose finest blooms we indicate by asterisks (*). The complete set were as follows: Caroline Testout, Etienne Levet, White Lady, Helen Keller, Bessie Brown*, Dupuy Jamain, Cleopatra, Duke of Teck, Mrs. R. Garrett, La France de '98, Maman Cochet, Rev. A. Cheales*, Boadicea, Dr. Sewell*, Mons. Noman, Gustave Piganeau*, Duchesse de Vallambrosa, A. K. Williams, Lady M. Fitzwilliam, F. Michelin, Frau K. Druschki, Marquis Litta*, Marchioness of Downshire*, and Ulrich Brunner; second row: Golden Gate,

Souv. de Pierre Notting, Laurence Allen, Comte de Raimbaud, Marchioness of Londonderry, Duke of Edinburgh, Mme. Jules Grolez, S. M. Rodocanachi, Mrs. W. J. Grant, Horace Vernet, Mme. G. Luizet, Général Jacqueminot, Jean Ducher, E.Y. Teas, Mrs. J. Laing, Mildred Grant, Duke of Connaught, White Maman Cochet, Mrs. Ed. Mawley, Mons. Delville*, Souv. de Pres. Carnot, Prince Arthur*, Souv. de S. A. Prince, and Grand Mogul; front row: Souv. d'un Ami, Xavier Olibo, Souv. d'Elise Vardon, Duke of Wellington, La France, Queen of Queens, Earl of Dufferin, Mme. Hoste, Pride of Waltham, Viscountess Folkestone, Comtesse de Ludre, Mme. Cusin, Hon. E. Gifford, K. A. Victoria*, Countess of Rosebery, Margaret Dickson, Marie Baumann, Luciole, Exposition de Brie, Clara Wilson, Mme. Hausseman*, Countess of Caledon, and Ulster. The collection was, indeed, creditable, and much admired.

The second place was accorded to B. R. Cant and Sons, The Old Rose Gardens, Colchester, and the blooms seemed a little heavier than those of the succeeding prizewinners, F. Cant and Co., of Braiswick, Colchester. In B. R. Cant's stand we found one of the best Bessie Brown blooms of the exhibition. K. A. Victoria was also well shaped and firm; Countess of Rosebery (small, but good), Marie Corelli (fair), Her Majesty (fair), Mme. G. Luizet (good, and very sweet to look upon), Mildred Grant (large, but loose and not attractive in colour), Gustave Piganeau (one of the finest on the stand), and lastly La Havre (a fine flower). Messrs. F. Cant had as their best the following: Ulster (nicely coloured), Prince Arthur (intense hue, though a loose flower), Souv. de P. Notting (neat and small), Lady Mary Corry (of the same shade, but with rounded petals), Marie Baumann (large, full, good), and lastly Caroline Testout.

The second class on the schedule, for forty varieties in trebles, drew four competitors, but the blooms were terribly weak. Messrs. B. R. Cant and Sons led off, and had the following flowers: Bessie Brown (good), A. K. Williams, Killarney, Helen Keller, Exquisite, Souv. d'un Ami, Duke of Teck, and K. A. Victoria (good) in the first box; Mrs. Cocker, Comte de Raimbaud, Souv. de S. A. Prince, Mrs. W. J. Grant, Marie Baumann, Frau Karl Druschki (good), Mildred Grant, Countess of Caledon (fair), in the second box; Mme. Hoste, Mrs. B. R. Cant, Antoine Rivoire, Dr. Sewell (very poor), Rubens, Empress Alexandra, Mrs. S. Crawford, and Ulrich Brunner, in box three. Then came Mme. G. Luizet (fair), Crown Prince, Medea, Mrs. Ed. Mawley, Mme. C. Ramey, Tom Wood, Dupuy Jamain, and La France in the fourth box; and the last of B. R. Cant's in this class were Mme. J. Grolez (poor), Marchioness of Downshire, Clio, Prince Arthur (small and rich), Suzanne M. Rodocanachi, White Lady, Hélène Guillot, and lastly Caroline Testout. Messrs. A. Dickson and Sons, Ltd., Newtownards, Co. Down, as seconds had small flowers, the pick being Ulster, Souv. d'un Ami, Shandon, Mrs. Geo. Kirk (a new coppery-tea), Marquis Litta, Gustave Piganeau (very fine), Lady M. Fitzwilliam, and Bessie Brown. Third came F. Cant and Co. with fair samples of La France, Lady Clanmorris, Tennyson, Mrs. J. Laing, and Frau Karl Druschki.

DIVISION B, CLASS 3, FORTY-EIGHT BLOOMS, DISTINCT.—Out of the entries in this class, the leading place was taken by Messrs. G. and W. H. Burch, Peterborough, with a fair, even set, including Caroline Testout, Marquis Litta, La France, Tom Wood, Viscountess Folkestone, Marchioness of Downshire, Margaret Dickson, Francois Michelin, Mrs. J. Laing, Countess of Oxford, Charlotte Guillemot, Gustave Piganeau, Clio, Mrs. W. J. Grant, Danmark, Her Majesty, in the back line; Bladud, Marie Baumann, Medea, Duchess of Bedford, White Lady, Ulster, Mme. C. Ramey, Frau C. Druschki, Luciole, Duke of Edinburgh, Mrs. Ed. Mawley, Horace Vernet, Bessie Brown, Rev. Alan Cheales, Lady Fitzwilliam, Ulrich Brunner, in the second row; and in the front row were Antoine Rivoire, A. Guinoisseau, X. Olibo, Lady Clanmorris, Mme. Hoste, Countess of Caledon, Anna Olivier, Comte Raimbaud, Mrs. S. Crawford, Dr. Sewell, Rubens, Exposition de Brie, Souv. de Président Carnot, Mme. G. Luizet, Maman Cochet, and Mme. E. Verdier. Messrs. Hugh Dickson and Co., Belfast, followed second, and had a model Etienne Levet and La France. Messrs. Burrell and Co., of Cambridge, followed third, out of four.

For the two dozen blooms in Class 4, Mr. Geo. Mount, of Canterbury, came foremost with fairly good flowers. He staged Caroline Testout, Ulrich Brunner, Mildred Grant, Xavier Olibo, Frau Carl Druschki, Mrs. J. Laing, Marquis Litta, and a good Bessie Brown; in the second row came Lady M. Fitzwilliam, Mme. C. Ramey, Prince Arthur, Killarney, Gén. Jacqueminot, La France, Lady Mary Beauclerc, and Duke of Edinburgh; in the front row there were Mrs. W. J. Grant, Souv. de Président Carnot, Mrs. S. Crawford, Viscountess Folkestone, Margaret Dickson, K. A. Victoria, Mme. Luizet, and Mrs. Mawley. Mr. Charles Turner must have been a very close second, and staged a perfect bloom of Ulster; while the third place fell to Mr. Thos. Rigg, South View Nurseries, Caversham, Reading, whose flowers were, however, behind in all respects. Six entrants were here.

Three competitors arranged collections in Class 5, for twenty-four varieties in threes, and the lead was given to Charles Turner, but the blooms, as in all the show, were disappointing. He included Bessie Brown, Killarney, U. Brunner, Rubens, Mrs.

Ed. Mawley, Beauty of Waltham, K. A. Victoria, and Maman Cochet in box one; La France, François Michelin, Duke of Edinburgh, Souv. de S. A. Prince, Marquis Litta, C. Testout, Tom Wood, and Margaret Dickson in the second box; in the remaining one there were Ulster, Medea, Gustave Piganeau, Mrs. J. Laing, Gén. Jacqueminot, The Bride, Mrs. S. Crawford, and Dupuy Jamain. Mr. Geo. Mount made a close second, and had good La France, Lady Mary Fitzwilliam, Ulrich Brunner, and Margaret Dickson.

Tea and Noisette Section.

DIVISION I., CLASS 6.—One can hardly admire the flowers this year, for even the best of them were so much below the show standard. Mr. Geo. Prince, of Longworth, Berks. was placed foremost for twenty-four varieties, his collection embracing Mrs. Mawley (silver medal bloom), White Maman Cochet, Souv. d'un Ami, Medea, Muriel Graham, Cleopatra, Maman Cochet, Devonensis, Emperor of Russia, Princess Beatrice, Mme. de Watteville, Princess of Wales, Lady Roberts, Mme. Hoste, Souv. de S. A. Prince, The Bride, Countess de Panisse, Golden Gate, Cornelia Koeh, Comtesse de Nadaillac, Alba Rosea, Bridesmaid, and Souv. de Pierre Notting. Messrs. Prior and Son, Colchester, as seconds, had good average flowers of Mrs. Mawley, The Bride, and Cleopatra; while F. Cant and Co., were thirds also with a handsome Mrs. Mawley.

For the twelve in this section two poor sets were staged, Burrell and Co., of Cambridge, beating Mr. John Mattock from New Headington, Oxford. Burrell's lot comprised Mrs. Ed. Mawley, Souv. d'Elise Vardon, Souv. de Pierre Notting, Boadicea, Mildred Grant, Catherine Mernet, Souv. de S. A. Prince, Souv. d'un Ami, Empress Alex. of Russia, Comtesse de Nadaillac, Lady Roberts, and The Bride.

Class 8 required fourteen distinct varieties, shown as trebles in vases, and only two entries were able to be made. These were from Prior and Son, who led; and Geo. Prince, a close second. Prior's blooms were Souv. d'un Ami, Medea, Mrs. Ed. Mawley, Anna Olivier, Maman Cochet, Caroline Kuster, The Bride, Cleopatra, Souv. de S. A. Prince, Catherine Mernet, Innocente Pirola, Marie Van Houtte, Rubens, and Alba Rosea. Mr. Prince's Mrs. E. Mawley carried him a long way up; they were good. We must apologise for giving such full lists of varieties, but it is necessary for the sake of the yearly Rose analysis, and may be accepted as truly in the interests of Rose culture.

Exhibition Roses in Vases.

Five sets of twelve varieties in vases containing seven blooms apiece, were staged as the 9th class, and again Mr. Mount showed the way. There was a freshness and elegance about these exhibits that was decidedly pleasing. Mr. Prince, who arranged his flowers over black velvet, followed for second, and Harkness and Co., of Hitchin, were third.

Mr. Geo. Prince was the only exhibitor of nine distinct varieties in class 10, and though the flowers were small they were nicely set out.

Garden or Decorative Roses.

The leading class for garden or decorative Roses was No. 11, which required thirty-six distinct varieties, not less than three trusses of each, and here the richest and brightest contribution came from Paul and Son, of Cheshunt. The flowers were pure in colour, nicely opened, and finely staged; H.T. Dawn, a crimple-edged rosy pink single, was exquisite; the Moss named Prolific is large, strong, and graceful; Marquis de Salisbury, Mme. J. Dupuy, Mme. Pernet, L'Idéal, Rambler Purple East, and Liberty were each in the pink of condition. Their Rambler Leuchstern, Thalia, and Gustave Regis (H.T.) also showed up to perfection. The second prize fell to Messrs. F. Cant and Co., Braiswick, Colchester, with handsome, well set-up bunches of Souv. de C. Guillot, Souv. de J. B. Guillot, Rainbow, Meta, Hebe's Lip, Mme. Pernet Ducher, Lady Battersea, Papa Gontier, Gustave Regis, Irish Glory, Killarney, Fabvier, Lucida plena, and W. A. Richardson. Then, in the third place, came Cooling and Sons, of Bath, with the rich Soleil d'Or, Moschata alba, Mme. d'Arblay, Hélène, Wallflower, Brunoni fl.-pl., and Mme. F. Weiss. There were but three entries.

Three tables containing each eighteen varieties were presented in class 12, and the awards fell to Mr. Geo. Prince, Mr. C. Turner, and Messrs. Cooling in this order. The flowers speedily withered, but Mr. Prince's Bellefleur, a good bright crimson, stood well, as also Janet's Pride, Madame A. Carrière, Mme. Chedane, Papillon, Moschata alba, Claire Jacquier, Tuscan (dark maroon), and the intense salmon-crimson Marquis of Salisbury. Messrs. Cooling had a massive bunch of Mme. d'Arblay (a profuse white).

For eighteen bunches of summer-flowering Roses (H.P.'s, H.T.'s, T.'s, and Chinas excluded) those staged by F. Cant and Co., were superior to Messrs. Paul and Son's collection, these being the only two entrants. The latter included Anne of Gierstein, Janet's Pride, Mikado, and the old Red Damask; while F. Cant had Red Provence, The Lion, Persian Yellow, Rosa Mundi, Rubin, Lucida plena, myranthes, Maiden's Blush, Leuchstern, The Garland, Hebe's Lip, Red Damask, Claire Jacquier,

Tuscany, Dundee Rambler, The Wallflower, and Inermis—a really choice set.

OPEN CLASSES.

Nurserymen and Amateurs' General Section.

The fifteenth class asked for twelve Hybrid Teas, and eight sets were presented, the first coming from Messrs. Prior and Son, with fresh blooms as fine as any in the show. Alex. Dickson and Sons, Ltd., were second, and F. Cant and Co. third. For twelve of any white or yellow Rose, shown in a vase, Alex. Dickson and Sons, Ltd., were first with Bessie Brown (which is blush, is it not?); Medea, from Mr. John Mattock, came second; and Rubens, from Prior, was third. Eight entrants contributed a vase each of any Rose other than a white or yellow, and here again the Newtownards firm led off, having Mrs. W. J. Grant (very choice flowers); Charles Turner being second with Mrs. J. Laing, and the third prize fell to Geo. Mount, with Caroline Testout (flowers large, but loose). In class 18, for nine blooms of any new Rose, the Dicksons of Newtownards were also first, staging Mildred Grant, which, however, were poorly finished. Bunyard and Co. formed a second with Robert Scott, the new American variety of a warm rose-pink hue; and third, B. R. Cant and Sons, with good blooms of Frau Karl Drusehki, the pure white H.P.

For twelve distinct varieties of new Roses since spring of 1900, the premier honour fell to B. R. Cant and Sons with Frau Karl Drusehki, Alice Lindsell, Perle Von Godesberg, William Askew, Souv. de Pierre Notting, Muriel Graham, Helen Guillot, Frau Peter Lambert, Duchess of Portland, Robt. Scott, Fröd. Harms, and Marie Louise Poirer. F. Cant and Co. were next with Mildred Grant, Souv. de Pierre Notting, Lady Mary Corry, Marie Louise Poirer, Mme. Chas. Monnier, Edith D'Ombrain, and Mme. Vermorel; and equal thirds were awarded to Alex. Dickson and Sons, Ltd., and Paul and Son, Cheshunt. The Mildred Grant here was a lovely flower. They also staged a spray of their Tea Rambler, which looked somewhat odd amongst the single blooms. Only four entered in this class.

The next class (No. 21) was a new one in the schedule, and was for an arch decorated with long sprays of two varieties of climbing Roses, and four competed. The shoots, measuring 6ft to 8ft long—flower laden, had been cut, and were trained to the trellis, the cut ends being placed in water. Messrs. Paul and Son led with Tea Rambler and Hélène; Geo. Prince coming second; and third, Mr. J. Mattock.

The sets of three sprays of Roses for ladies' wear was limited to five contestants, and J. Mattock won, Geo. Mount being second, and Messrs. J. B. Langton third.

Only two growers had tables of twelve single flowered Roses, the first award being secured by Cooling and Son with Crimson Bedder, Leuchstern, Yellow Austrian Briar, Paul's Single White, Irish Glory, Moschata alba, Rugosa, Andersoni, The Lion, Pink Roamer, and Lucida. Paul and Son succeeded, and had fine bunches of Rugosa alba, Royal Scarlet, Seneca Anemone, Brenda, &c.

In the last of the open classes, Mr. Geo. Mount beat Mr. Mattock for the nine varieties of buttonhole Roses, shown in vases, in bunches.

Best Blooms.

Silver medals were accorded for each of the following: Mr. Geo. Prince with Mrs. E. Mawley, for the best Tea or Noisette; D. Prior and Son with Mrs. John Laing, the best flower other than H.T., T., or N.; D. Prior and Son with Bessie Brown, the best H.T. These were in the nurserymen's section. Amateurs: Mr. E. B. Lindsell with Mrs. J. Laing (H.P.); Mr. Alfred Tate with Bessie Brown (H.T.), and the same competitor with Muriel Graham, the best Tea.

AMATEURS.

GENERAL SECTION.—The champion class for thirty-six blooms, distinct varieties, was represented by five competitors, who were pretty evenly matched; but eventually Mr. E. B. Lindsell, Hitchen, was awarded the blue ribbon. His varieties were, reading from left to right, White Lady (grand), Prince Arthur, Marchioness of Londonderry, Helen Kellar, Lady Mary Fitzwilliam, Gustave Piganeau, Mrs. J. Laing, Suzanne Marie Rhodocanachi (exploded), Mrs. S. Crawford, Dupuy Jamain, Mildred Grant, and François Michelin; second row: Alfred Colomb, Madame Hoste, Horace Vernet, Muriel Grahame, Duchess of Bedford, Mrs. W. J. Grant, Louis Van Houtte, Kaiserin Augusta Victoria, A. K. Williams, Innocente Pirola, Dr. Sewell, and Bessie Brown; front row: Ulster, Beauty of Waltham, Caroline Testout, Victor Hugo, Marquise Litta, Marie Baumann, La France, Duke of Wellington, Alice Lindsell, Maurice Baumann, Madame Gabriel Luizet, and Duchess of Portland. Mr. O. G. Orpen, West Bergholt, Colchester, was a good second, relying chiefly on Teas and Hybrid Teas. His best varieties were Mildred Grant (fine), Countess of Caledon, Bessie Brown, White Lady, Madame Jules Grolez, Cleopatra, White Maman Cochet, Medea (beautiful), and Mrs. F. Cant. Mr. Conway Jones, Huaclecote, Glos., was third with good blooms of Niphotos, Mrs. E. Mawley, Caroline Testout, and Bessie Brown.

In the class for twenty-four varieties, distinct, there were five entries, but the steward had so muddled up the classes that it was difficult to find out who had been awarded the prizes; but ultimately it was found that Mr. W. Mease, gardener to A. Tate, Esq., Leatherhead, had been awarded first prize. The varieties were Mrs. E. Mawley (grand), Princess Beatrice, Madame Cusin, Comtesse de Nadaillac, Mrs. W. J. Grant, Gustave Piganeau, La France, Bessie Brown, A. K. Williams, Madame de Watteville, Ethel Brownlow, Horace Vernet, White Maman Cochet, Marchioness of Dufferin, White Lady, Mrs. J. Laing, Medea, Bridesmaid, Marquis Litta, Cleopatra, Corinna, Duke of Teck, Kaiserin Augusta Victoria, and Duchess of Bedford. Mr. Thos. B. Gabriel, Woking, was a good second, his best blooms being Mrs. J. Laing, Caroline Testout, La France, Marquise Litta, Maman Cochet, and its white form; while Mr. E. M. Eversfield, Horsham, was coupled with Mr. Alexander Hill Gray, Bath, for third place.

For twenty-four blooms distinct there were four competitors, Mr. E. B. Lindsell winning first prize. His varieties were Mrs. J. Laing, Chas. Lefevre, Helen Kellar, A. K. Williams, White Lady, Comte Raimbaud, Mrs. W. J. Grant, Gustave Piganeau, Victor Hugo, Kaiserin Augusta Victoria, Prince Arthur, La France, Dr. Sewell, Anna Olivier, Marie Baumann, Lady Mary Fitzwilliam, Madame Gabriel Luizet, Alfred Colomb, Viscountess Folkestone, Beauty of Waltham, Madame Hoste, Duchess of Bedford, Marchioness of Dufferin, and Earl Dufferin. Mr. O. G. Orpen was second with smaller though younger flowers. The best were White Maman Cochet, Bessie Brown, White Lady, Kaiserin Augusta Victoria, and Rubens. Mr. C. J. Salter was third with blooms in rather too advanced a stage.

Class 28 was for twelve distinct varieties, three blooms of each. Here there were four entries, Mr. E. B. Lindsell winning with a nice level exhibit. The varieties were Gustave Piganeau, Mrs. Sharman Crawford, Beauty of Waltham, Mrs. W. J. Grant, Lady Mary Fitzwilliam, Mrs. J. Laing, Kaiserin Augusta Victoria, Marquise Litta, Anna Olivier, A. K. Williams, Madame G. Luizet, and Dr. Sewell. Mr. C. J. Salter, gardener to Mrs. C. B. Haywood, Reigate, was second with good examples of Caroline Testout, Bessie Brown, Madame Gabriel Luizet, and Kaiserin Augusta Victoria; while Mr. Conway Jones was third.

For a single vase to contain nine Roses, except Teas or Noisettes, there were only two entries, the Rev. J. Pemberton, Havering-atte-Bower, being placed first with Caroline Testout, and Mr. C. J. Salter second with Mrs. J. Laing.

Divisions D to G.

For twenty-four blooms, distinct, confined to growers of less than 2,000 plants, there were no less than seven entries, the first prize being well won by Mr. R. E. West, Reigate, whose blooms were pretty even throughout. The varieties were Bessie Brown, Suzanne Marie Rhodocanachi, Dupuy Jamain, Caroline Testout, Madame J. Pereire, Madame Hoste, Ulrich Brunner, La France, La France No. 2, Chas. Lefevre, Mrs. J. Laing, Marquise Litta, Mrs. Paul, Etienne Levet, Madame Gabriel Luizet, François Michelin, Mrs. G. Dickson, Duchesse Val-dronne, Medea, Merveille de Lyon, Dr. Andry, Princess of Wales, Gustave Piganeau, and Souvenir d'un Ami. Mr. W. C. Romaine, The Priory, Old Windsor, was second with nice blooms of Jeannie Dickson, Bessie Brown, Niphotos, La France, and Mrs. J. Laing; while Mr. E. M. Eversfield brought up the rear.

For eight trebles Mr. E. M. Eversfield was well ahead with typical blooms of Comte de Raimbaud, Bessie Brown, Madame Gabriel Luizet, Captain Hayward, Helen Keller, Bessie Brown, Ulrich Brunner, Mrs. J. Laing, and Kaiserin Augusta Victoria. Mr. W. C. Romaine followed with Medea, Maréchal Niel, and Marquise Litta as his best examples, the third prize going to Mr. C. W. E. Duncombe, Stanstead Abbots, Ware.

The class for seven blooms of any variety, Teas and Noisettes excluded, brought out seven entries, Mr. W. C. Romaine being placed first with a nice vase of Jeannie Dickson, Mr. E. M. Eversfield being second with Caroline Testout, and the Rev. H. A. Berners, Harkstead Rectory, Ipswich, third, with fine blooms of Madame Abel Chatenay. The exhibitors should be compelled to label their flowers.

The Ben Cant Memorial prize was offered for twelve blooms distinct, confined to growers of less than one thousand plants. There were eleven entries, and Mr. Thomas B. Gabriel was awarded first prize, the varieties being Mrs. J. Laing, Le Havre, Bessie Brown (good), Captain Hayward, Dr. Andry, Lady Mary Fitzwilliam, Prince Arthur, Frau Karl Druschki (quite gone), Madame Hoste, Général Jacqueminot, La France, and Marquise Litta. Mr. G. Moules, Hitchen, was a capital second, and Mr. E. Wilkins, Sideup, third.

For five blooms in a single vase there were six entries, the first prize being awarded to Mr. G. H. Baxter, Brentwood, with Marquise Litta; Mr. F. R. Curtis, Colchester, being second with Mrs. J. Laing; and Kent brought up the rear, for Mr. E. Wilkins was awarded third with Marquise Litta.

The Grahame Memorial Prize was for growers of less than five hundred plants, nine blooms distinct. Here there were ten

contestants, who made a good show, Mr. C. Page, Earldoms, Enfield, winning well, with first-rate blooms of Bessie Brown, Ulrich Brunner, Frau Karl Druschki, Madame G. Luizet, Gustave Piganeau, Ulster, Caroline Testout, Tenyson, and Mrs. W. J. Grant. Mr. J. T. Thompson, Bounds Green, was second, and Mrs. E. A. Mouldon, Stevenage, third.

For six blooms, distinct, Dr. S. E. Pallett, Earl's Colne, was first with good examples of Bessie Brown, Kaiserin A. Victoria, and Mrs. W. J. Grant. Mr. A. C. Turner, Tatton, Edgware, was second, and Mr. C. F. H. Leslie, Hertingfordbury, Herts, third. There were eleven entries in this class.

For five blooms staged in a single vase, one variety, there were ten good entries. Here Mr. R. W. Bowyer, Hertford Heath, was awarded first position with a nice vase of Mrs. W. J. Grant, the Rev. F. J. Fulford, Foxley Vicarage, Glos., being second with La France, while Mr. A. C. Turner came third with Kaiserin Augusta Victoria.

Class 38 was for growers of less than two hundred blooms, six varieties distinct to be staged. Six exhibitors staged satisfactorily, and the first prize was allotted Miss A. M. Lucas, Hitchen, who had a good box, the best blooms being Madame Hoste, Madame Gabriel Luizet, and Kaiserin Augusta Victoria. Dr. Ernest Maltby, Feltham, was second, and Mrs. E. M. Wightman, Bengis, Herts, third.

Class 39 was for twelve blooms distinct, the first position going to Mrs. L. E. Simes, Hitchen, who had a strong, level exhibit, the best varieties being Marquise Litta, White Lady, Bessie Brown, Mrs. J. Laing, and Kaiserin A. Victoria. Mr. Geo. Moules was second and Mr. W. Kingston, Bedford, third.

For four trebles there were six entries, some staged in an unorthodox manner, the first prize being awarded Mr. W. Kingston for a fine display of Medea, Marquise Litta, Caroline Testout, and Kaiserin A. Victoria. Mr. E. Wilkins was second and Mr. G. H. Baxter, Brentwood, third.

The Ramsey Cup created a great amount of interest, and the competition was exceedingly keen, but Mr. W. Mease carried off the honours with a grand exhibit. The varieties were Bessie Brown, Madame Cusin, Souvenir de Madame E. Verdier, Dr. Sewell, Horace Vernet, White Maman Cochet, Gustave Piganeau, Mrs. Edward Mawley, Muriel Grahame, Maman Cochet, Kaiserin Augusta Victoria, and Ulrich Brunner—certainly the best box in the amateur section. Mr. Alexander Hill Gray was second, and the Rev. J. H. Pemberton third.

The novices turned out well with half a dozen distinct varieties, no less than fifteen exhibitors facing the judges. The first prize was awarded to Dr. T. E. Pallett, Earls Colne, who had a good level box. Mr. P. Sugden, Winchmore Hill, was second, and the Rev. J. B. Shackle, Maidenhead, third.

For six blooms, not less than four varieties, the competition was keen, there being twelve entries. The first prize was won by Mr. A. G. Farndon, Sutton, who had Mrs. J. Laing and Helen Keller, good. Mrs. E. M. Wightman being second, and Miss Du Buisson, Guildford, third.

A class was provided for exhibitors who had recently joined the Society. Strange to say that there were but three entries, the first prize going to Mr. H. T. Hinton, Heytesbury, Mrs. E. M. Wightman being second, and Mr. R. F. Lambe third.

The competition for growers within eight miles of Charing Cross brought out eight boards, some very good. Mr. W. J. Thompson, Bounds Green, being first with Mrs. J. Laing, Caroline Testout, and Bessie Brown in good form. Mr. W. G. Adcock, Torrington Park, being second, and Mr. E. R. Smith, Muswell Hill, third.

There were but two entries for new Roses. Mr. G. W. Cook, Muswell Hill, being first, and the Rev. J. H. Pemberton second, both exhibitors staging poorly.

Tea and Noisette Section.

The trophy class for eighteen blooms, distinct varieties, Teas or Noisettes, proved attractive, for there were five exhibitors. Here the veteran exhibitor, Mr. Alex. Hill Gray, proved the victor. The varieties were Mrs. E. Mawley (grand), The Bride, Catherine Mermet, Muriel Grahame, Bridesmaid, Medea, Ernest Metz, White Maman Cochet, Maman Cochet, Souvenir d'Elise Vardon, Devonensis, Madame Cusin, Cleopatra, Princess Beatrice, Comtesse de Nadaillac, Comtesse Panisse, Madame Hoste, and Princess of Wales. The Rev. F. R. Burnside was second with Madame Cusin, Mrs. E. Mawley, Sylph, Innocente Pirola, and Princess of Wales as his best flowers; while Mr. O. G. Orpen was third.

The Cocker Cup only attracted three exhibitors, the Rev. F. R. Burnside winning in first-rate style; his varieties were Mrs. E. Mawley, Medea, White Maman Cochet, Innocente Pirola, Catherine Mermet, The Bride, Souvenir d'Elise Vardon, Cleopatra, Madame Bravy, Maman Cochet, Muriel Grahame, Sylph, Rubens, Souvenir d'un Ami, Madame Hoste, Madame Cusin, Anna Olivier, and Caroline Kuster. Mr. Alex. Hill Gray was second with good blooms of Mrs. E. Mawley, Bridesmaid, Maman Cochet, and Princess Beatrice; while the third prize fell to Mr. C. J. Salter.

The Prince Memorial prize for eight trebles was represented by four exhibitors, Mr. Alex. Hill Gray scoring well; his varieties were Mrs. Ed. Mawley (good), The Bride, Bridesmaid, Innocente

Pirola, Medea, Catherine Mermet, Souvenir d'Elise Vardon, and Madame Cusin. The Rev. F. R. Burnside was second, and Mr. O. G. Orpen, third.

Class 50 was for seven blooms of one variety, the first prize being awarded the Rev. F. R. Burnside for a fine exhibit of White Maman Cochet; Mr. Alex. Hill Gray followed with Medea, and Mr. E. M. Eversfield was third with Comtesse de Nadaillac. There were five entries in this class.

The smaller growers were represented well in the class for twelve varieties, distinct, Mr. Thos. B. Gabriel being first with good blooms of Mrs. Ed. Mawley, Medea, Jean Ducher, and Bridesmaid. Mr. M. Whittle, Leicester, made a fair second, while Mr. R. Foley Hobbs, Worcester, brought up the rear with weaker flowers.

Class 52 for five blooms, one variety, was poorly represented, there being only two exhibitors, Miss B. H. Langton, Hendon, being awarded first for a vase of the Hon. Edith Gifford, while Mrs. H. A. Sivewright, Oxford, was second with Anna Olivier. For nine blooms distinct there were four competitors, Mr. G. H. Baxter being first, Mr. Arthur Munt, Slough, second, and Mr. F. R. Curtis, Woking, near Colchester, third.

For six blooms distinct there was a good entry of seven, the first prize falling to Mr. W. R. Hammond, Burgess Hill, whose best blooms were White Maman Cochet, Maman Cochet, and Ernest Metz; while Messrs. R. W. Bowyer and A. C. Turner followed in the order named. In the class for five blooms arranged in a vase made a poor display, although there were nine contestants. Mr. G. H. Baxter was first with Medea, the Rev. F. J. Fulford second with the same variety, and Mr. R. W. Bowyer third with Anna Olivier.

For four trebles there were three exhibitors, Mr. A. Slaughter, Steyning, being first, with nice blooms of Maman Cochet and Mrs. Ed. Mawley, the Rev. F. J. Fulford being second.

Class 57 was for six blooms, not less than three varieties. Here Mr. H. Clinton Baker, Bayfordbury, scored, with a nice even exhibit. The Rev. J. B. Shackle, Maidenhead, was second, and Mrs. H. A. Sivewright third.

Roses in Vases and Garden Varieties.

Mr. Alex. Hill Gray under this section was the only exhibitor in Class 59, and he deservedly was awarded first prize for good vases of Bridesmaid, Madame Hoste, and The Bride. Miss B. H. Langton was awarded first prize for five varieties of five blooms each, there being no other exhibitors. There were nine bowls of Roses, the best being from Miss Jessie B. Langdon, Hendon, the second prize going to Mrs. O. G. Orpen, while the third was awarded to Miss A. F. Harwood, Colchester.

The competition was good in the class for a vase of cut Roses, but the weather played havoc with them in a few hours. Mrs. Ed. Mawley was awarded first honours, Miss Jessie B. Langton coming second, while Miss A. F. Harwood was third. Five beautiful baskets of Roses were staged, but Mrs. O. G. Orpen proved the victor with a pretty display; while equal seconds were awarded Miss J. B. Langton and Miss A. F. Harwood.

The class for table decoration was keenly contested, and the visitors seemed to deem it necessary to rejudge the exhibits, but an hour or so makes all the difference, which people appear to forget. Suffice it to say that Mrs. O. G. Orpen was awarded first with a pretty arrangement of single Roses, Mrs. Holland, Grange Road, Sutton, following, while Miss J. B. Langton brought up the rear.

Though there were only two exhibitors in the class for eighteen bunches of garden Roses, both were good. Mrs. W. Mease was to the fore with fine bunches of Crimson Rambler, Mme. A. Guinoisseau, Perle d'Or, Gustav Regis, W. A. Richardson, Irish Glory, Cecil Brunner, and Lady Battersea. The Rev. J. H. Pemberton was second with Madame Alfred Carrière, Purity, The Garland, and Reine Olga de Wurtemberg.

Class 66 was for twelve bunches of decorative Roses. Again there were but two competitors, Mrs. A. F. Perkins, Holmwood, Surrey, being first with nice typical bunches of Madame Chedane Guinoisseau, Claire Jacquier, Dr. Rouges, W. A. Richardson, and Camoens, the Rev. F. J. Fulford being second.

For six bunches of Sweet Briars there were three entries, Mrs. Horne, Reigate, being placed first, Mr. G. H. Baxter second, and Mr. Ed. Mawley, Berkhamsted, third. In the class for six bunches of decorative Roses Mr. A. C. Turner, Edgware, was first, while Messrs. Ed. Mawley and G. W. Cook followed in the order named.

The buttonhole Roses were attractive, Mr. O. G. Orpen being placed first for six bunches with Clara Watson, Anna Olivier, Impératrice Alexandra, Madame Hoste, Madame Ravary, and Ma Capucine. Mr. A. C. Turner made a good display for second place.

For five distinct varieties of garden Roses, not less than three sprays in a bunch, there was keen competition, but Mr. O. G. Orpen came out first, with good bunches of Purity and Lady Curzon. The Rev. J. H. Pemberton followed with smaller bunches, and Miss B. H. Langton brought up the rear.

Miscellaneous Exhibits.

Messrs. W. Cutbush and Son, Highgate, made a nice display of Carnations, Lantanas, and Verbenas. The Carnations were all

in pots, and the best were Lady Wolverton, Nautilus, Thora, Don Juan, Tintagel, Maggie Hodgson, Lord Welby, Florizel, Sheila, and H. J. Cutbush. Lantana Barnet Bronze was excellent.

From Messrs. H. Cannell and Sons, Swanley, came a fine display of Cannas, the chief varieties being Elizabeth Hoss, Maiden's Blush, Black Prince, Miss Amy Ker, Annie Laurie, Comte de Bouchaud, and Burbank; the whole being nicely displayed with Ferns and Palms.

Messrs. Dobbie and Co., Rothesay, contributed a nice display of Pansies and Violas. The former suffered somewhat from the heat, otherwise they were good. A few of the Violas were Ophelia, Lark, Emma Sophia, Meteor, Saturn, Christiana, Mary Charles, and Mary Robertson. The Pansies included most of the varieties seen at the Temple and Holland House exhibitions, the most noteworthy being Mrs. W. Watson, Maggie McPhail, R. C. Allan, Miss A. Brown, and Mrs. R. Fife.

Messrs. W. Spooner and Son, Woking, made a nice display of Roses, the back being composed of garden and decorative varieties, while the front was filled with the orthodox boxes. In the former were noted most of the Penzance Briars, Cecile Brunner, Madame Ravary, Souvenir de Catherine Guillot, Crimson Rambler, Leuchstern, Madame Abel Chatenay, and Madame Jules Grolez; while good blooms of Georges Schwartz, Kaiserin Augusta Victoria, Marquise Litta, Papa Lambert, Bessie Brown, Mrs. W. J. Grant, and Frau Karl Druschki were seen.

Messrs. G. Bunyard and Co., Maidstone, staged Roses in one hundred and twenty-five varieties. These were arranged in vases and boxes of the show type. Some of the best flowers were Souvenir de Président Carnot, Margaret Dickson, Clio, Anna Olivier, Madame Hoste, Mrs. W. J. Grant, Caroline Testout, Ulster, and Helen Guillot.

Messrs. Hobbies, Ltd., Dereham, made their chief feature Dorothy Perkins, in pots and in a cut state. The plants were masses of flower, the vases contained good examples of Lady Battersea, Mrs. J. Laing, Frau Karl Druschki, and Mildred Grant.

Mr. Geo. Mount, Canterbury, made a splendid display of Roses arranged with long stems, the chief varieties being Captain Hayward, Mrs. S. Crawford, Caroline Testout, Mrs. W. J. Grant, Mrs. J. Laing, Catherine Mermet, and La France.

From Messrs. G. Jackman and Son, Woking, came a fine bank of flowers, the back being composed of vases of decorative varieties, with a little Gypsophila elegans, while the front was made up of Roses in boxes, the chief varieties being W. A. Richardson, Papillon, Liberty, Gustav Regis, Madame Ravary, and Perle d'Or. In the boxes were most of the well-known varieties.

Isle of Wight Rose.

This annual show was held on June 26, in the grounds of the far-famed Carisbrooke Castle, and in radiantly beautiful typical June weather. The changing of the locale of the show yearly doubtless tends to maintain its still undiminished popularity, but it is open to question if a more romantic or fascinating site could be selected than the environs of these grand old ruins, of which Islanders are so proud. Many historical dramas, with issues of no common magnitude, have been enacted here, comparative mimic warfare, the incarceration of one of our Royal Sovereigns brings back to us conflicting emotions and memories and associations which to some the passing of the years has hallowed, and to all intensified.

The present season has not deigned to favour the efforts of rosarians, but the stands of Hybrid Perpetuals, were still almost perfection. Teas were undoubtedly exhibited in less quantity than in some former years, and below the average somewhat in quality. In the open classes Messrs. F. Cant and D. Prior and Son fully maintained the great reputation of their respective firms by setting up some grandly developed blooms in open class for twenty-four; conspicuous in first-named firm's stand being Mrs. F. Cant and Mildred Grant. In the latter's two I most admired were Helen Kellar and Suzanne M. Rodocanachi. In the eight distinct varieties, three trusses of each, Mr. F. Cant had superb Oscar Cordell (this being also well represented in other stands). It was most pleasing to note such great favourites as Mrs. John Laing, Ulrich Brunner, and Marchioness of Downshire well to the fore in this class.

Coming to Island exhibitors, whilst many stands were distinctly good, Lady Campbell (gardener, Mr. Burdon) stood eminently first in most classes. Her finest blooms were Killarney, Mrs. Sharman Crawford, Mildred Grant, La France, Oscar Cordell, Clara Watson, Marchioness of Londonderry, La France '89, and Mrs. E. Mawley, a magnificent bloom. Mrs. Croft Murray, Mrs. Disney Leith, the Rev. Jeans, Mrs. Winthrop also staged some good blooms; and D. Soaton, Lymington, Hants, staged well in amateurs' class. The Garden Roses were very pretty and tastefully arranged, notable being Papa Gontier, Marquis of Salisbury, and Rainbow. The committee and hon. sec. are to be congratulated on completeness of arrangements.—SOUTHERN GARDENER.

[Owing to the numerous and lengthy reports of shows this week, a number of other notices are held over.]



Fruit Forcing.

FIGS: SECOND CROPS.—The fruits on early forced trees have now swelled to a good size, and to insure a number of fine Figs they must not be overcropped, the foliage kept free from insects, and the feeding liberal. Early forced planted out trees should have the young wood ripened and be resting by the middle of October. Borders that have become dry must be watered to bring them into a moist condition down to the drainage. Liquid manure will be required by trees having the roots in borders of limited extent. Mulch lightly, and keep damped when it becomes dry, so as to encourage surface roots. Syringe daily, except in dull weather, when morning or early afternoon syringing will be sufficient, and always early enough to allow of the foliage getting dry before night. Judicious and forcible syringings are usually sufficient to keep down red spider, but if it gets a hold dislodge by means of an insecticide. Maintain a night temperature of 60deg to 65deg, and 70deg to 75deg by day. Ventilate early, especially on bright mornings. Keep the house through the day at 80deg to 85deg with sun heat, and close early, so as to run up to 85deg or 90deg, or even 95deg, providing plenty of atmospheric moisture.

SUCCESSION HOUSES.—When the fruit changes colour afford more air, insuring a circulation constantly. Reduce the moisture gradually, keeping it from the fruit, which expose as much as possible to light and air. Lessened supplies of water at the roots tell in favour of quality, yet they must not be allowed to suffer. Trees swelling their crops will be benefited by a light mulching of short material over the roots, and through this supply liquid manure in the case of trees carrying heavy crops. In fine weather syringe twice a day, always in good time, and close so as to run up to 90deg, 95deg, or 100deg. As the fruit approaches ripening provide a little ventilation constantly, putting it on just before nightfall, and let it remain, increasing it early.

VINES.—When the fruit has been cut, syringe the foliage well in order to preserve it as long as possible in a healthy state, for if the leaves fall early second growth not unfrequently sets in when they ought to be resting. A moderate extension of the laterals will usually prevent premature ripening of the foliage, and will not do any harm, but irregularities of growth, and particularly gross ones, should be checked by pinching, or be entirely removed. Admit air to the fullest possible extent, and maintain moderate moisture in the border, particularly at the surface, so as to keep the roots there instead of allowing it to become dry, and so causing them to descend in quest of moisture. Weakly Vines must have liquid manure occasionally, which will help them to retain the foliage, and assist them in plumping the buds and storing nutritive matter in the adjacent wood.

GRAPES RIPENING.—Afford plenty of air directly the Grapes begin colouring, with a little fire heat to insure a circulation of atmosphere constantly, and prevent the deposition of moisture on the berries during the night or in dull periods, which is one of the chief causes of "spot," especially in the case of Muscat of Alexandria. Maintain, however, a fair amount of atmospheric moisture to insure the proper swelling of the berries and the preservation of the foliage in health. Allow the temperature to fall to 65deg at night, otherwise securing a temperature by artificial means of 70deg to 75deg, and 80deg to 85deg through the day for Black Hamburgs and similar varieties with sun heat. Muscats should have a night temperature of 65deg to 70deg, 75deg to 80deg by day from fire heat, and 85deg to 90deg from sun heat. Supply water or liquid manure thoroughly to the inside borders, enough to reach the drainage, and a light mulching will keep the surface moist. Outside borders must be watered if dry weather prevail, always giving enough water or liquid manure to moisten the soil down to the drainage.

GRAPES STONING.—Ventilate early, so as to allow the moisture to escape and the atmosphere to gradually warm in order to avoid scorching, and a gentle warmth in the pipes with a little air constantly is the best safeguard against scalding of the berries. This, with free ventilation by day, and not closing early at this critical period, will usually ward off the moisture that, heated on the berries, causes them to scald. As the liability to scald does not extend over a period of more than a fortnight or three weeks, give particular attention in the late stages of stoning to the ventilation. In bright weather succeeding a dull and cold period there is most danger of scorching, and with the modern system of large panes of glass there is absolute necessity at such times from bright sun, especially for Muscat of Alexandria. A double thickness of herring net over the roof lights is very beneficial, and affords all the shade required.—ST. ALBANS.

Kitchen Garden.

CELERY PLANTING.—All Celery plants, with the exception of those recently pricked out, will be ready to transplant finally into the trenches. Shallow trenches about 15in wide into which has been worked some decayed manure will provide a good rooting medium. They may be prepared on a piece of ground from which another crop has been cleared, at a distance of about 4ft or 5ft apart. Single rows are the most convenient, as the cultivation of Celery entails a considerable amount of trouble in trimming, earthing, watering. If space is limited double rows may be grown; but the trenches must be wider apart to allow of the extra banks of soil for earthing. The plants should lift with good balls of soil attached to the roots. They are then easily planted and soon start into vigorous growth. A suitable condition for lifting is easily ensured if the nursery bed is thoroughly moistened the day previously to planting. Plants that are short and sturdy are in every way the best fitted for planting, and entail less trouble. Those which do not possess a good ball of roots are almost sure to flag under strong sunshine, hence need shading until root action indicates that they are established. Plant in the evening or on dull days.

SAVOYS.—Providing that the plants in the seed beds, or which have been picked out to strengthen, are sturdy enough, they should be inserted in permanent quarters. The early varieties may be planted first, and these being dwarf and not requiring much room may be planted closer together than the more vigorous, large growing sorts. Tom Thumb Savoys may be planted as close together as a foot, while the larger varieties may be planted 15in to 18in apart, in rows 2ft asunder. The ground for Savoys may be moderately well enriched and dug deeply. It should also lay well open, and the plants ought to have the whole space, which is much better for growth than crowding them among Potatoes in order to economise room.

CAULIFLOWERS.—Plants recently placed out are becoming established, and ought, in order to aid growth, to receive frequent hoeings. Copious supplies of liquid manure will be of great assistance, not only in promoting immediate growth, but of storing nutriment in the soil for future use by the extending roots. Cauliflowers like rich living, especially if growing in an open position, so that they have the important advantages of abundant light to build up a sturdy habit with good leaves and fibrous roots. These will invariably be followed by close, compact heads, tender and white in autumn.

TOMATOES.—A considerable amount of systematic attention must be given Tomatoes planted out against walls and fences in the matter of tying, watering, rubbing out superfluous shoots, and setting fruit. A sunny position is essential, so that the wood made may be short and sturdy, the leaves of firm texture, and the flower trusses strong. A thoroughly healthy and moist condition of the rooting medium will best conduce to this, therefore the watering should not be neglected. Strictly confine the plants to one stem, rubbing out the side shoots as they form in the axils of the principal leaves. Do not adopt the system of curtailing these. If the plants have plenty of light and air and ample room the foliage will not be unduly large. Later on, if the leaves encroach and shade the fruit, some of the leaflets may be shortened back slightly, and any yellowing foliage at the base below the bunches of fruit may be removed. When a good set of fruit has been secured give the plants liquid manure, and a mulching of manure over the roots will prove useful. Heavy bunches of fruit ought to have a little support.—EAST KENT.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1903. June.										
Sunday ...21	N.E.	deg. 51.7	deg. 46.3	deg. 61.7	deg. 44.9	Ins. —	deg. 53.3	deg. 54.4	deg. 53.7	deg. 38.6
Monday ...22	N.W.	58.7	50.2	67.3	39.4	—	54.9	54.5	53.7	31.3
Tuesday ...23	S.E.	61.6	53.2	67.5	41.5	—	56.2	55.0	53.7	33.4
Wed'sday 24	S.E.	59.0	54.0	67.5	55.2	—	58.7	55.8	53.7	51.8
Thursday 25	W.S.W.	54.7	53.8	71.2	47.5	—	58.2	56.3	53.7	39.8
Friday ...26	S.W.	65.5	59.5	76.2	54.0	—	60.5	56.9	54.0	48.5
Saturday 27	S.W.	74.9	64.8	82.7	55.0	—	63.4	58.2	54.2	49.1
MEANS ...		60.9	54.5	70.6	48.2	Total. —	57.9	55.9	53.	41.8

A week of bright summer-like weather, with a rising temperature towards the end.



* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

MELONS SWEATING (B. H.).—In all probability the wet state of the Melons was the result of a too low night temperature and the consequent deposition of moisture by condensation, and possibly, also, you did not admit air soon enough in the morning. If you maintain a night temperature of 65deg, with a little ventilation at the top of the pit or frame, and open the ventilators further as soon as the heat rises in the morning, increasing the air with each 5deg increase of temperature, you will not be troubled with further "sweating," which is dangerous when so pronounced as described in your letter. The specimen was not in condition to be named. If you will send another so packed that it arrives in a fresh state it shall be attended to.

STRAWBERRY FLOWERS GONE BLACK IN CENTRE (H. R.).—The flowers are what is known as "blind," and is chiefly due to weakness of plant, the ovary parts being very defective, not being well formed in embryo, and consequently when the trusses of bloom are pushed for flowering they are seen to be dark in colour and soon become black. Possibly the plants have suffered from having the roots unprotected in the early part of last winter, which would have a checking influence on the crowns, and thus hindering the formation of the trusses of bloom in embryo, giving at flowering time nothing but blooms defective in the ovaries and pistillate organs, the male element in such instances being often perfected, the anthers supplying pollen; but the central part of the flower is brown or black, and fertilisation cannot be effected. As the leaves are very small we should attribute the failure to general weakness of plants, they not having had the proper treatment in autumn to effect the proper formation of the floriferous parts of the crown for the coming crop of fruit.

EARLY CAULIFLOWERS GOING OFF (A. H. C.).—The stems are what is known as maggoted, and the maggots accompanying the specimens are those of the Cabbage fly (*Anthomyia Brassicae*). The maggots are the cause of the mischief, they eating passages in the stems and roots, and sometimes destroy whole fields of Cabbages and other Brassicas, and often are very destructive of early Cauliflowers in gardens, which is probably owing to their being planted in very rich soil, or ground that has only recently been heavily manured, especially if this was new or rank. Our experience all tends to confirm prevalence of maggot presence after the application of much stable or farmyard manures. To grow Cabbages and Cauliflowers well without good well-enriched soil appears an impossibility; but new or rank manure should be avoided, as the Cabbage maggots are to be found in dung, as well as at the plant roots. Instead of applying and digging in manure at planting time, it, when necessary, being applied in the previous winter, a dressing of a mixture of three parts superphosphate and two parts bonemeal at the rate of 3½lb per rod should be applied at planting time, or in the case of seed sowing at sowing time, and when the plants have got well hold of the soil after planting, or after singling in the case of seed-sown plants, apply a dressing of two parts finely crushed nitrate of soda and three parts of salt—ground agricultural or rock salt preferably—3½lb of the mixture per rod, keeping it from the hearts of the Cabbages or Cauliflowers. This will give good results both as regards the freedom from maggots and in the crop. Where land is much subject to maggot a dressing of gas lime fresh from gasworks is a good cure. It should be applied a considerable time in advance of cropping, about ½cwt per rod, spreading evenly on the surface and leaving there a month or six weeks before digging in. This acts by killing the maggots existing in pupal state in the soil, and care being taken not to introduce them in or encourage attack by application of new or rank manure, there is seldom any mischief from the Cabbage fly. Watering the affected plants with lime water, soaking hot lime for twenty-four hours in water, and watering with this when clear, in the afternoon is known to destroy the maggots. A solution of two parts nitrate of soda and three parts salt, 1oz or 2oz per gallon of water is also destructive of the maggots. Plants that are attacked by the maggots may be easily known by their dull lead colour, and by the leaves drooping or flagging in the heat of the day.

PEACHES AND NECTARINES FALLING (J. F., Godalming).—The origin of the evil we attribute mainly to the powerful fumigations to which you allude at a critical period—namely, about the stoning time. Tobacco smoke in sufficient strength to kill the black aphid temporarily paralyses the trees, and the effect of this is seen sooner or later in falling fruit. Every endeavour should be made to prevent the insects getting established, and this can usually be accomplished by the free use of the syringe and such insecticides as may be needed for the purpose. The frost, if severe at the time you name, would aggravate the evil, but we can scarcely think it was so intense as to have such disastrous results; you do not, however, indicate its severity.

PRUNING IVY AND EVERGREENS (E. R.).—The worst time to cut Ivy on walls is just before "the cold weather sets in" in the autumn, as then the walls are bare and unsightly for months, besides exposing the stems to the action of possibly severe frost, and we have known them killed by such exposure. The best time to cut it is during showery weather towards the end of April or early in May, as then fresh growths appear at once, and a cheerful glossy face is produced. Once in three years is usually sufficient for shaving off Ivy close to the walls to which it clings, during the intervening years the runners simply being cut off with a knife, leaving the principal foliage. We know Ivy that has been thus managed for half a century, and in all probability more than twice that time, and it is in the most satisfactory condition. If evergreens need cutting down below the foliage, early spring is the best time; if the shrubs only need trimming into shape the work may be done at any time now until September.

OUTDOOR MUSHROOM BEDS (S. L. B., Liverpool).—Sawdust containing 70 to 75 per cent. of horse droppings, mixed with an equal quantity of straw manure, will answer admirably, provided you can make the ridges firm enough and the angle sufficiently acute to throw off the wet, and this we think you might accomplish by using a less quantity of sawdust with the manure for the outsides of the beds, or a larger portion in the inside would be permissible. If woodlice are very numerous they are injurious to Mushrooms. You will soon find out whether they devour yours or not. They are not very easy to destroy, but they will not congregate in large numbers if you keep the material that covers the beds moist with an occasional sprinkling of salt and water. Woodlice object to this, and Mushrooms do not, provided not more than an ounce of salt is mixed in each gallon of water. It may be well, perhaps, to intimate that this is about the worst period of the year for making outdoor Mushroom beds, unless their position is exceptionally cool.

BARREN STRAWBERRY PLANTS AND THEIR RUNNERS (T. A. C. C.).—As a rule it is not advisable to retain barren plants, and certainly bad practice to take runners from plants that have not produced fruit or flowered in the season of taking the runners. Such barren plants always produce earlier and much stronger and considerably greater number of runners than fruitful plants, and as a general rule are not worthy of keeping, as they almost invariably make much growth with a paucity of flowers and fruit. Sometimes, however, late runners, or those not planted until autumn or spring, as in field culture, make a vigorous growth in the summer following, and produce little fruit the first season; but in the second year afford a good crop. If the runners were taken from fruitful plants we do not see why they should not produce fruit another season, as probably the present barrenness is due to excessive vigour, though they certainly had not formed trusses of bloom in embryo, and this rather inclines to their being taken from barren plants or runners. In that case they are not worth keeping.

NAMES OF PLANTS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (A. L.).—1, *Polygonum molle*; 2, *P. saecalachiense*; 3, *P. Bistorti*; 4, *Morina longiflora*; 5, *Cepalaria tatarica*; 6, *Scabiosa longifolia*. (P. F.).—1, *Galium molugo*; 2, *Miscanthus sinensis*; 3, *Atriplex hortensis*; 4, *Salvia officinalis*; 5, *S. argentea*; 6, probably *Archangelica officinalis*. (Hortus).—1, *Elæagnus umbellatus*; 2, *Rhododendron myrtifolium*; 3, *R. hirsutum*; 4, *R. Wilsoni*; the *Dianthus*es were much withered; they are probably 5, *D. cæsius*; 6, *D. suavis*; 7, unrecognised; 8, *D. plumarius*; 9, *D. fruticosus*; 10, *Lotus corniculatus*; please only send six specimens. (E. S. W.).—*Saxifraga Sibthorpi*.

Trade Note.

Dobbie and Co.

We have just purchased sixty acres of fine, freehold land in the Essex seed-growing district. It lies alongside the main Great Eastern line, and is close to Marks Tey Station. We intend removing our seed-growing operations from Orpington to this new place next season.—DOBBIE AND CO.



The Midsummer Outlook.

Though in the opinion of those best qualified to judge agriculture has been none too prosperous during the past twelve months, yet the fact that suitable tenants can still be found to cultivate the land goes far to prove that farming is not all loss, and we trust that this year of grace 1903 may bring not only a living but a fair profit to every good farmer.

We have arrived at a very critical point, and given good weather conditions we do not fear for the immediate future. Taking Cereal crops first, we may not be far wrong in saying that Wheat is promising. Certainly there have been attacks of wireworm and complaints of injury therefrom, but the attacks were but local, and entirely confined to recently ploughed up pasture, which has been grazed for two or more years. On the whole, Wheat looks well; it is not only of good length of straw, but sturdy of habit, and the ears which are appearing are long and well-developed. Last year at this time thin and patchy fields of Wheat were too frequently met with; this year we have not seen a bad piece, and we think the prospect for Wheat decidedly above the average, and it must be the premier Cereal crop of the year.

Barley, we fear, will be very variable, which is a fatal word to use in connection with it. More equable climates than ours have of late produced Barleys which have seriously competed with ours in the market for fine malting quality, and we cannot afford any discount arising from ungenial weather. Barley requires forcing treatment and a right-away growth without check. A check of some kind no doubt few fields have escaped, and if we should be fortunate enough to have a fair yield it is hardly possible to have fine quality. The yield will probably vary greatly, and as the poor, weak soils will be seriously deficient, it is probable that the crop will be well below the average.

Oats, of which a considerable acreage has been sown, are a little more promising than Barley, and if the portion of the crop sown after seeds were left out, the prospect might be quite up to the average. Oats after seeds, however, are anything but satisfactory. Wireworm has been very destructive to the plant, and the fields present a very patchy appearance. As the world's production of Cereals does not keep pace with the increase of the population, apart from the fact that Indian and other native races are increasing their average consumption per head, there is a reasonable prospect of firm to higher prices, especially for bread stuffs.

The price of bread is also likely to be affected by the prospects of the Potato crop, which is anything but bright just now. The planting generally was not done under favourable conditions, and thousands of acres which were forward in growth and most promising have been recently severely damaged by frost. At the present moment there is something approaching a famine in Potatoes, and unless the season should prove very favourable to the further development of the tuber, there is a prospect of higher prices than usual during the coming winter. The Potato crop is one which, under most favourable conditions, shows great powers of recovery, and it is unsafe to assume too much, but certainly at present the condition of the crop is not promising. An acre of Northern Star is reported sold for £500. We have heard £500 per ton quoted for seed delivered next planting time. There is a big margin between the two prices if the variety is a great cropper.

Mangolds will be very variable. A large acreage was sown two or three weeks after the usual time, and a considerable portion did not germinate until the rain came. There is plenty of plant, but these belated crops will not have time to develop into very large roots. The prospect

for Swedes is fair, and for common Turnips good. It has been rather too cold for the young early sown Swedes, and the later ones may be the best, but there has been plenty of rain in nearly all districts, and with anything like a warm summer we have confidence in forecasting a fair average root crop, if there is not a very big one.

Hay and Clover must be big crops. In some parts the dry weather brought about somewhat premature cutting, but there are few light crops, and many very heavy ones. Red Clover and Cowgrass are so thick on the ground that the weight per acre must be much above the average. That big crops of fodder are anticipated is shown by the fodder markets, which are much depressed. Old hay is almost unsaleable, and Clover is very cheap. The hay producer will have to hold his produce over or accept a poor price. Hay well saved and well stacked will keep a long time if the farmer has sufficient capital to play the waiting game.

The prospects of the stock owner are undeniably bright, the only dark spot being the low price of wool. Yet the longest lane has a turning, and wool buyers are showing some keenness in looking after lots. Prices are firmer, and we are informed that there is a chance of a return to more remunerative rates. We used to regard 21s. per tod as a ruinous price. We shall feel like millionaires when wool reaches that price once more.

The crop of lambs was a good one, and the season has been a record one for immunity from disease and loss. Prices have kept at a high level, and are likely to remain there, at least for a time. There is plenty of keep, and if our expectation of a fair root crop is realised farmers will be in a position to hold their sheep and dictate prices to the consumer. Foreign supplies are not large enough to materially affect the situation. Beef, too, is likely to make a fair price; the good supply of straw and hay will provide ample food for the winter, and there should be little need for the farmer to sell his cattle before they are well primed up.

Pig feeding does not promise well. Young pigs are still dear, far too dear for the price of pork, which now makes little more than 5d. per lb. If American imports soon return to their old level we shall have a poor trade for pig products.

Work on the Home Farm.

A gloriously fine week has seen a large breadth of Turnips sown under ideal conditions, and this work being satisfactorily completed we can turn our attention in earnest to the making of hay which we were about to commence when the rain came. The rain washed the dust off the grass, but has not greatly increased the crop, and as the weather appears settled we will go on with the work at once. Two grass reapers will soon cut the crops down, men being set to work with scythes to mow the corners out and all banks and occupation roads; the rough grass from the banks and corners will be used to top the ricks with.

We have just noticed the first ears of Wheat, so can fix the commencement of the corn harvest for August 14. If Turnips have a good growing time we shall be able to get all nicely hoed and cleaned before harvest. Swedes are not nearly big enough for striking out, but we are looking the Mangolds over for doubles, and weeds which have revived in somewhat alarming numbers since the rain. They have had another skerrying, as also have the Cabbages. We have plenty of moisture in the soil now, and we must keep the surface fine to conserve it as much as possible. Horse hoes too often lie in the shed when they should be at work. If there are no weeds to kill farmers are apt to consider skerrying superfluous, but it is a great mistake; for surface stirring is absolutely necessary apart from its action in destroying weeds. We have noticed that farmers who have been late in cleaning their Turnip fallows, and have had a good deal of rubbish to work out and get off when other farmers were drilling, were generally successful in getting good Turnip crops. This we attribute to the thorough stirring and aëration which the land received at the last stage, and if thorough stirring is good before drilling, surface stirring must be beneficial afterwards.

Bullocks are doing better, but not so well as they have done in many seasons, and the cost of the cake continued for a longer time will tend to reduce the profit. Fortunately cakes are a little cheaper, the inevitable result from the great plenty of natural food.

Mares with early foals are now turned away on grass. An allowance of corn is not necessary, but politic; for both mare and foal will be better for it, and the latter will be getting educated to look out for itself. Seven pounds per diem of crushed Oats and bran will cost about 3s. per week, and the foal will pay for it in increased growth and substance.

For Present Planting.**ROSES**
ON THEIR OWN ROOTS.

Strong Plants in 5 inch Pots of leading Hybrid Perpetual, Hybrid Tea, Tea, and other Classes, 10/6 to 18/- per dozen, 75/- to £6 per 100.

DESCRIPTIVE CATALOGUE FREE ON APPLICATION.

N.B.—Many of the choicer varieties can now be supplied which are not available on their own roots from the open ground in the autumn and winter.

WM. PAUL & SON
WALTHAM CROSS, HERTS.**HARDY WATER LILIES**

And other Aquatic Plants.

GREAT SPECIALITY — BEAUTIFUL COLLECTIONS. LOWEST PRICES. Consignments are sent by means of Parcel Post during the spring and the summer. We supply 12 varieties of WATER LILIES, our own selection, for 20/-

B. LATOUR-MARLIAC,
NURSEYMAN,
Temple-sur-Lot (Lot-et-Garonne), FRANCE.
Catalogue free on application.

PRICE 10d., POST FREE.

WINDOW GARDENING
FOR THE MANY

Or Instructions for Managing Plants in rooms throughout the year, with Special Directions for their Propagation and Culture.

Office: 12, MITRE COURT CHAMBERS, FLEET STREET, E.C.

BY SPECIAL
APPOINTMENT**ORCHIDS—ORCHIDS**

QUANTITY IMMENSE.

Inspection of our Range of Houses

IS CORDIALLY INVITED BY

HUGH LOW & CO., BUSH HILL PARK,
MIDDLESEX.**WEST'S INSECTICIDE.**

Before wasting money on worthless imitations, test a FREE SAMPLE, and yourself decide on its merits. It will cost you nothing, and prove to you that

**WEST'S PATENT
GARDEN SUNDRIES****WEST'S PATENT AERATED SPRAY SYRINGE.**

The Best and
Cheapest for
all purposes.

Cannot get
out of Order.



Plants protect,
Money Save,
AND
Labour Ease.

PRICE ONLY

5/6CARRIAGE
PAID.

CATALOGUE containing 50 large pages, with 100 Illustrations, with Hints on Horticulture, post free. No Trade Terms possible off these low prices. Buy from the Manufacturer of all Horticultural Sundries—

C. E. WEST, ROUNDHAY, OR DIRECT FROM THE **HIGHAM HILL,**
WORKS, LONDON N.E.
NO AGENTS. (SUFFICIENT ADDRESSES).

No. 1202.—VOL. XLVII., THIRD SERIES.

CLIBRANS
ROMAN HYACINTHS

FOR many years we have made the above a very special line. Owing to the high standard of quality at which they are maintained, our sales largely increase each year. They now amount to hundreds of thousands of bulbs annually.

WE APPEND EXTRACTS FROM A FEW RECENT TESTIMONIALS:—

LEEDS, June 4th, 1903.

The Roman Hyacinths supplied the last two years have been very fine indeed. They were admired by everyone who saw them.

WARKWORTH, May 25th, 1903.

The Roman Hyacinths supplied by you last year were entirely satisfactory, as I have invariably found them to be.

WEST HARTLEPOOL, May 26th, 1903.

I cannot speak too highly of the quality of your Roman Hyacinths which we got from you last autumn.

NEWCASTLE-ON-TYNE, January 6th, 1903.

It gives me great pleasure to inform you that the Roman Hyacinths supplied by you have been remarkably fine, and I am well pleased with the same.

HARROGATE, June 3rd, 1903.

Bulbs supplied by you, especially the Roman Hyacinths, turned out excellent, and were much admired by visitors to the hotel.

CO. LIMERICK, May, 1903.

Having grown for several seasons a good quantity of early white Roman Hyacinths supplied by you, I feel it my duty to say I always found them of first-rate quality. I have often counted as many as five and six spikes on a single bulb.

KEIGHLEY, October 16th, 1902.

The white Roman Hyacinths received from your firm in July are now in full bloom and are very fine indeed; never had a better lot.

WEST HARTLEPOOL, June 8th, 1903.

I have great pleasure in informing you that the Roman Hyacinths I had from you last year were very fine, and the best I saw in the district.

Prices on Application.**ALTRINCHAM & MANCHESTER****Journal of Horticulture.**

THURSDAY, JULY 9, 1903.

Co-operative Banks.*(Concessions recently granted by the Treasury.)*

UNION is strength" has been a recognised truism from remote times, but although mankind has for ages grasped the idea to some extent, and applied it in various forms, it is equally certain that the grand possibilities of union—co-operation—are only beginning to dawn upon the people of this country; and when later these possibilities shall be fully realised, tasks which seem impossible to-day will be successfully carried out with comparative ease. The value of co-operation might be illustrated in many ways. Here is one: the numerous threads of a rope are weak and insignificant in themselves, but when hosts of them are woven together they form a mighty whole of surpassing strength.

Many who are interested in rural pursuits can see clearly that the time has now arrived when co-operation in its various forms is imperatively necessary, in order to secure for small holders the fullest reward for their labour. Among other methods of combination, village co-operative banks—if started on business principles and conducted with proper safeguards—may be made the means of bringing prosperity to many rural districts where at present the land "crieth for the tiller," and where waste and ruin stalk abroad. The co-operative bank movement has long passed the experimental stage, as a society was founded in this country as long ago as 1894, which has been highly successful, and is now appreciated more than ever. The promotion of such societies in England has hitherto been greatly hampered by the registration fee of £1, modification of rules fee 10s., and other regulations. Early this year, however, a memorial to the Treasury was drawn up by the Co-operative

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

Banks Association asking for the removal of these restrictions, and presented by them in conjunction with the Irish Agricultural Organisation Society and the Agricultural Organisation Society (England). These important concessions have now been granted by the Treasury, and henceforward village credit societies in England should rapidly increase in number.

The late Mr. R. W. Hanbury, M.P., was the first leading statesman in this country to grasp the beneficial possibilities of co-operative credit, and but for his untimely death would have been the principal speaker at a meeting which was being organised by the association for May last. On December 1, 1902, Mr. Hanbury made the following remarks at Aberystwyth:—

There is another experiment which I should like to see made, especially in a district of small farmers. The system of agricultural banks has been carried out almost universally on the Continent, and has been a great success in Ireland. I believe that to a community of small farmers these banks would be invaluable (hear, hear). They are not for the purpose of borrowing large sums of money, but we know that there are particular times in the year when £2 or £3 might be as useful to a small farmer as £20.

It might enable him to avoid the necessity of selling an ox or a cow, which could be kept to ultimate profit, by meeting the demands of the moment. In agricultural banks, I think, a way might be found of tiding over an evil day, and it is to help of this kind that many a farmer owes his rise in life. From a failure he has become a success. There are a hundred ways in which such banks might be of great use. All these considerations that I have been putting before you are not mere theories. If they were I should not be here saying a word in their favour, because I feel that farmers cannot afford to make experiments. But when these things are carried out with great success under similar conditions on the Continent and in Ireland, for the life of me I cannot see why they should not also be a success here.

The support of so influential and practical a statesman as the late Mr. Hanbury would doubtless have done much to promote the establishment of agricultural banks; but although he has been snatched away in the zenith of his usefulness, his clearly expressed ideas on this subject should stimulate others to help forward a movement capable of doing such a vast amount of good. A network of village credit societies should be gradually formed throughout this country. To direct the establishment of co-operative banks in town and country districts a national association has been formed on lines precluding personal profit by its members. Mr. R. A. Yerburch, M.P., is chairman; the following are the vice-presidents: The Countess of Warwick, the Earl of Coventry, Mr. F. S. W. Cornwallis, Major W. Evans Gordon, M.P., Mr. R. J. Price, and Mr. W. C. Steadman, L.C.C. There is also a strong council, which includes the Rt. Hon. Horace Plunkett, the Earl of Stamford, and Professor Bottomley; Mr. H. C. Devine being the energetic and enthusiastic secretary.

The objects of the society are clearly defined in the following particulars, sent out by the association, whose office is at 29, Old Queen Street, Westminster, S.W. They are as follows:

PEOPLE'S COUNTRY CO-OPERATIVE BANKS.

The need of cheap credit for the productive and economic purposes of farmers, small cultivators, allotment holders, and the labouring classes generally is very great. Big tenants, as a rule, can obtain monetary advances from joint stock banks at a fair rate of interest, thereby earning a more substantial living than would otherwise be possible. The object of the Co-operative Banks Association is to help smaller people to obtain similar advantages, by combining together, and pledging their united liability, so as to secure advances from capitalists at a low rate of interest, and lend the money out amongst themselves. At present their business is not considered worth the attention of the banks, and they either have to struggle along as best they can, or apply to a money-lender, which is worse, as to borrow money from advertising usurers generally means misery and ruin. The large number of bills of sale in the names of farmers, dairymen, gardeners, &c., conclusively proves the necessity for reasonable methods of obtaining credit amongst the agricultural population.

In addition to assisting those already on the land, people's country co-operative banks would undoubtedly be a means of increasing the number of small holdings, of the nature of those promoted by Lord Carrington on his estate in Lincolnshire, by which, besides the tenants, landlords and large farmers would also benefit, the first by prompt payment of rent, the second by the increased amount of strong, willing, able labour in their neighbourhoods. Co-operative banks, in creating the necessary financial credit, would go a long way towards stemming the prevailing drift into towns, and raising the independence and morale of the industrial community. If established generally, they would be a great aid to farm labourers to add to their small wages by the purchase of pigs, poultry, &c., and repay the outlay from profits.

On the Continent country credit societies of the kind advocated have worked wonders in increasing the comfort of the people, and exterminating usury. The Raiffeisen Agricultural Banks Associa-

tion, which has now over 2000 affiliated societies, boasts that neither member nor creditor has lost a farthing by them since the establishment of the movement in 1849.

In organising a country co-operative bank there are certain rules, regulations, and principles which are of the greatest importance. The first is the unlimited liability of members. All risk can be safeguarded by a standing order limiting the sum to be lent to any individual member, without a special resolution of a majority of the committee of management, and also the total amount to be loaned.

It is also vital to the success of the bank that no person shall be admitted as a member who has not a high character for sobriety, honesty, and integrity. Unless members of co-operative banks are persons of good character capitalists have no security in lending to them, and will naturally abstain from doing so. An entrance fee of 6d. may be charged. It is not necessary to have shares, but if they are adopted they can be as low as 2s. 6d. or 5s., payable by instalments, so that even the poorest may not be excluded.

In order that members shall be fully acquainted with one another it is absolutely necessary to limit the area of each society to a small district. When one parish is too small, two or three can be joined together. The ideal population for a bank district is between 1000 and 2000.

Each member has one vote only, and should fully realise that he is responsible for the transactions of the bank. There must be an executive committee, secretary, treasurer, and board of supervision, elected at annual or quarterly meetings of the whole membership. The duties of the committee are to admit members, grant loans, and fix the rate of interest for borrowers and depositors.

Loans are only granted to members. They are also granted solely for profitable, productive, or economic purposes, such as the purchase of manure, seeds, poultry, pigs, cows, greenhouses. Full time will be allowed for the borrower to make his profit out of the loan before repayment. As no dividends are paid to members, the rate of interest will be the lowest possible, co-operative banks being run in the interests of the borrowers; members making their profit by means of, but outside of the bank.

Every applicant for a loan must offer in addition to his own personal security, that of one or two of his friends who are willing to guarantee to repay the loan in full to the bank with interest, if the applicant himself fails to do so. The executive committee must satisfy themselves as to the reliability of these sureties.

The bank will receive deposits and pay thereon at least 3 per cent. interest, which is more than the Post Office Savings Bank. The security offered is the joint unlimited liability of all the members, combined with regular statements of accounts and a yearly public audit. By depositing their savings in a bank of this kind, men and women will not only secure more interest, but be helping their neighbours by circulating money in their own districts for productive purposes, under proper safeguards. The deposit department also affords a useful opportunity for richer people, who do not require to borrow, to assist in this movement for raising the tone of village life without giving, which it is believed will be fully taken advantage of. A set of model rules and also any further information required to start a co-operative bank on the above lines at once in affiliation with the Central Association, may be obtained from the Organizing Secretary.—HENRY C. DEVINE, Co-operative Banks Association, 29, Old Queen Street, Westminster, S.W.

A few illustrations will give some idea of the possibilities of usefulness of such societies:—

Case 1.—A farm labourer, an industrious man, who had brought up a large family, and had managed to save a little money. He took half an acre, then three acres and the proverbial cow. Then, when nearly sixty years old, seized the opportunity to hire a small farm of fifty acres, which he managed to enter and stock, except with sheep. To purchase these, the society granted him a loan of £30 on the security of his live and dead stock and corn in stack, which he insured at the instance of the society for £150. But for this loan the borrower would have had to sell his sheep food to his own loss, and to the damage of the farm. Having punctually discharged his debt, he applied for a fresh loan of £40, again to buy sheep, as his roots were more plentiful than during the previous season. The loan was granted on the same security as before, and duly discharged. A further sum of £20 was granted, and paid off to the day. After a year the borrower saw a chance of placing his sons on a small farm, which he practically stocked for them. In order to do this, however, and replenish his own holding, he applied for another loan of £50, which was granted on the same security. This chain of loans, therefore, assisted in starting the tenants of two small holdings, and it is estimated that if the original borrower were now to go out of farming after six years, he would be found to have quadrupled the capital with which he started.

Case 2.—One member borrowed £10, and bought some ewes, which, with their produce, more than doubled the amount before the time of repayment (twelve months) arrived.

Case 3.—A £20 loan to another member to repair his Cucumber and Tomato houses prevented them going further into decay, and probably getting past repair.

Many other equally striking examples might be given;

but I think enough has been advanced to show that there is an untold field of usefulness open to village credit societies. The method of working them is such as to assist the honest, self-reliant, and industrious; but to leave severely alone the laggard, intemperate, and thriftless individual. A strong incentive is therefore provided for the latter class to qualify for the former one.

In conclusion I should like to emphasise the fact that the above association is *not* a bank, but a non-profit-making, non-political society for showing small cultivators, tradesmen, and the working classes generally how they can form co-operative banks of their own in towns or villages. All persons desirous of doing so should write to the secretary at the address already given, who will be pleased to forward any particulars required. All, however, should bear in mind that "without preliminary union there can be no such thing as co-operative credit."—W.

The Late Mr. William Thompson.

We regret to have to record the death of one of the oldest inhabitants of Ipswich in the person of Mr. William Thompson, of Haslemere, Bank Road, who passed away on Friday, the 3rd inst. The deceased gentleman was an octogenarian, and death was attributable to natural decay. Mr. Thompson, who leaves a son (Mr. Sidney Thompson) and three daughters to mourn his loss, had resided in Ipswich all his life. He married Miss Fisher, of Yoxford, who predeceased him in 1884. As a young man the deceased gentleman was always deeply interested in science. He began by studying chemistry and photography, and was one of the earliest pioneers of the old Daguerreotype method of photography. In pursuance of that hobby he travelled extensively in his younger days, and took a series of photographs, which would still be extremely interesting, even though the method is quite out of date. Some of his photographs of Old Ipswich have been reproduced in various archaeological and other publications. After a time his health began to fail him a little, and he turned his attention to botany, his pursuit of that science being at the outset purely a hobby. Little by little he began the exchange and sale of rare seeds, and he published his first catalogue in 1855—a very slim volume, that compares rather quaintly with the large books that are issued by the firm nowadays. His speciality was always herbaceous and Alpine plants, and he never cared much about exotics. Through many correspondents in all parts of the globe he gradually was enabled to introduce to the English gardening world a large number of plants hitherto not brought into cultivation.

Mr. Thompson's first noteworthy success was with *Rhodanthe maculata*, which in 1863 he introduced from Swan River, Western Australia. This had a great vogue, and is still one of the favourite Composites in decoration. In the following year he introduced two more varieties of the same plant—*R. alba* and *R. atro-sanguinea*. After that the flower that brought him most note was the beautiful *Aquilegia cærulea*, which, with *A. chrysantha*, was the first parent of the many splendid varieties of the long-spurred *Aquilegia* that have since become very common; indeed, that really opened the door to all the hybrids. His introduction of *Godetia Whitneyi* and *Leptosiphon roseus* rendered 1871 a year memorable in the gardening world. In later years his greatest find was the lovely *Phacelia Campanularia*, which he introduced from California in 1885, and about the same time he also brought in the *Clematis coccinea*.

As an illustration of the esteem in which he was held by botanists for his enterprise, it will be interesting to quote a dedication by Sir Joseph Dalton Hooker, then Director of the Royal Gardens at Kew:—"Vol. 32 of third series, 1876. This volume of the 'Botanical Magazine' is dedicated to Mr. William Thompson, of Ipswich—to whose zeal in introducing and intelligent skill in raising hardy American plants, and especially those of the Western United States, European gardeners in general, and the 'Botanical Magazine' in particular, are indebted for many most interesting and ornamental novelties—by his faithful friend, Joseph D. Hooker, Royal Gardens, Kew, December 1." Mr. Thompson's friends included such men as Charles Darwin, Sir Michael Foster, Dr. Asa Gray (the great American botanist), and his gardens have made Ipswich a Mecca for botanists of all countries. That the merits of the deceased gentleman were not only recognised in this country, but also abroad, is shown by the fact that in Diamond Jubilee year (1897) he was decorated with the gold Victorian Medal of Honour for his services to botany. It has been said of him that to carry on his work, handicapped as he was by a physical infirmity, was in itself an act of heroism in his devotion to science.

Mr. Thompson edited a monthly magazine called "The English Flower Garden," which began in 1852-3. It was illustrated by exquisitely coloured reproductions from hand paintings by Fitch, the great flower painter; but these proved too elaborate to yield

a profit, and the venture was abandoned. In 1855 he published "The Gardening Book of Annuals," a kind of gardeners' guide. This was followed in the next year by a supplement, and a year or two ago—as the work had gone entirely out of print and was very rare—he was pressed to bring out a fresh edition, and he had sketched out and largely completed a much more imposing edition.

The deceased was a man of wide interests, great reading, marvellous memory, and an extremely good linguist. He was of loveable disposition, and displayed an old-world courtesy, combined with entire simplicity of character. It is interesting to recall that, despite his rather hermitic habits, he insisted on being taken to the Town Hall on the occasion of the proclamation of King Edward VII., and intimated that he had also been present when Queen Victoria was proclaimed in 1837.

To allude for a moment to the strictly business side of Mr. Thompson's career, it may be said that from the first garden plot, started something like half a century ago, the business developed into one that is now widely known. Mr. John Morgan had been connected with it for over thirty years, and when the commercial side became too heavy for Mr. Thompson, he took Mr. Morgan into partnership. Without losing anything of its scientific character, the business extended so much that instead of the original small garden there are now three large nurseries in Ipswich.

The interment took place on Wednesday at Ipswich Cemetery.

Lilium pardalinum.

Though there is something almost barbaric in the colouring of *Lilium pardalinum*, the Panther Lily, yet this North-west American species is always appreciated where it grows well and reaches its full stature and the size of flower, together with healthy foliage—all the symptoms of its being in favourable conditions. Its red and orange flowers, spotted with brown, are Eastern-like in their opulent colouring, though hailing from the far west, and have all the glowing effect we find in the most regal race of the queenly flower to which they belong. Such gorgeously coloured blooms cannot but arouse in the mind of the lover of the Lily a desire to possess *L. pardalinum* and to cultivate it to perfection. Though many attempt the cultivation of the Panther Lily, the number of bulbs lost annually from want of care is enormous, and it is solely due to that "rule of thumb" practice which is the bane of gardening that this effective Californian Lily is so seldom seen in health and happiness. A glance or two at its natural habitats will, however, be helpful to those who seek to enjoy in its fulness the fine colouring of the Panther Lily. By the coast line of the west of North America from Vancouver Island to California, *Lilium pardalinum* is to be found in plenty, though its leaves and flowers show signs that it is not in its most congenial home. This is to be found inland, where, by the banks of streams and in sunny recesses, moisture, sunshine, and shelter can all be enjoyed by this fine *Lilium*, which there attains to a height of from 6ft to 9ft, and which forms great clumps several feet across. We are not familiar with it in such proportions here, though there is no reason why it should not be in such masses as in its native land. It has been as fine in some places where its requirements have been studied, and many more might have it thus, so rapidly does it increase, and so easily does it grow.

Its prime requirements are plenty of moisture, a boggy soil, and full sunshine, and one who has plenty of space might do worse than plant a wet meadow with *Lilium pardalinum*, feeling assured that, barring accidents, it would in a few years be a sight for the gods to admire, a source of delight to all who gazed upon it. In a warm climate and with a dry air it may linger in life but it will be neither so healthy nor so happy. Planting is best done as soon as the bulbs can be procured, which is in autumn, or it can be delayed until spring, though I like to keep these Lilies as short a time out of the soil as possible. It does not require to be deeply planted; I should make 6in the maximum, but it will thrive quite well with merely the barest covering of soil above the rhizomatous bulbs. Three inches I look upon as a fair depth for the crowns. They seem absolutely hardy, as I have had bulbs which were barely covered uninjured by intense frosts. While *L. pardalinum* is all the better for a few inches at least of moist soil underneath, it is wonderfully accommodating, and I have it doing well here with its bulbs only an inch or two above the concrete shelf at the edge of a little aquatic tank. The soil, however, is just what it likes, and it has always plenty of moisture. Its liking for sunshine is shown by its having been less vigorous this season, when the solar rays have been too scarce for many things and by the shorter stems yielded by bulbs planted in half-shaded positions. There are several varieties of *Lilium pardalinum* offered in the trade, but imported bulbs will generally give a considerable variety, though, of course, this depends largely upon the place in which they have been collected. A capital form is known as *Bourgæi*, but almost any variety will be sure to please.—SOLWAY FRITH.



Cypripedium spectabile.

This western United States hardy *Cypripedium* might be named the finest bog plant of its own season, which is the present time. The Moccasin Flower, as it is also called, flourishes in cool, moist, half-shaded spots among peat and fibrous loam. No finer bed can be seen than the one in the rock garden at Kew, and here it is at home. Should increase be desired, the crowns can be divided in autumn, but only strong plants should be so treated. The flowers are exquisitely beautiful, having a rosy carmine lip, and white sepals and petals, delicately shaded with rose or blush. It deserves much wider culture.

The Week's Cultural Notes.

Lælia purpurata is one of the grandest Orchids now in flower, and to ensure a fine display next season the plants should be kept as quiet as possible after flowering. I never like to see them growing away in late autumn, for the pseudo-bulbs are never so strong or the flowers so freely produced as on stems that come right away in spring after the plants have had a good rest during winter. It may be asked, How can the plants be prevented from growing? This is rather difficult at times, but the recognised method is to thoroughly ripen or consolidate the present growth and lower the temperature somewhat afterwards.

It is not so easy to do in the case of this beautiful *Lælia* as in that of a *Dendrobium*, as those who have tried have found. The foliage is more easily injured by exposure to sun and air, while at times no amount of care will prevent growths starting. In such cases grow them on as rapidly as possible, and endeavour to finish the stems by the early winter. It is not too late to top-dress the plants should roots appear to be starting, but the best time for repotting is past, this being in spring, when the young shoots are just beginning to push roots on their own account.

Another species now in bloom is *Lælia Boothiana*, or *lobata*, as it used to be called. This Orchid is singular in thriving upon apparent neglect, and if kept well potted on in new compost every few years will never flower, though it will increase and multiply very rapidly. On the other hand, leave it alone to starve, as it seems, in its pot, leave it until the new growths hang all about over the edges, and do not treat it any too well with regard to watering, and the probability is you will be rewarded by an ample display of its charming blossoms. *Lælia Boothiana* is found in Rio de Janeiro growing fully exposed to the hot sun upon bare rocks, and this treatment is necessary to flower it satisfactorily.

Lælia majalis, or the Mayflower, should by now have almost finished its growth, and when complete the plants should be placed outside right in the eye of the sun and watered as often as necessary. This, too, will not flower if kept growing under the usual conditions all the year round. It must be thoroughly ripened by exposure; but, given this little attention, it is a most lovely plant, its blossoms very large in comparison with the size of the growth, the colour a pretty soft pink or rose, with purple markings on the lip.—H. R. R.

Calceolarias at Bolehall Manor House.

Tamworth has during recent years become well known to horticulturists on account of the widespread popularity of Mr. W. Sydenham's Violas and Pansies. To visit the neighbourhood without seeing them is almost an unpardonable omission. I do not, however, plead quite guilty, as I passed the entrance gate and saw the brilliant glow of colour in the distance. My time was extremely limited, or I should certainly have endeavoured to find out the latest varieties in Violas; but I had to be content with inspecting, and thoroughly enjoying, a feature in the delightful garden of the Rev. W. MacGregor, on the opposite side of the road.

I had previously heard of the fine display of Calceolarias which Mr. G. Higginson each year provides for his employer, and was therefore determined not to miss the opportunity of seeing them, and I was fortunate in catching them in almost the full tide of beauty. The plants were arrayed in the well-kept conservatory, and my impression on seeing them was that there is nothing to equal these favourites of the older florists

for providing a beautiful and varied display during May and early June. Many of the specimens were of a stamp which prominent exhibitors might well envy, and such as only masters in the art of growing can produce. No matter whether they were growing in 6in, 7in, or 8in pots, the same sturdy vigour was noticeable throughout, the amount of growth being in proportion to the size of pot.

The individual flowers were as remarkable for their size and substance as for their delightful and varied markings. It would require a bold man to attempt to accurately describe the colours and markings of this fine strain of Calceolarias. I certainly will not court failure by trying to do so, but instead will urge all gardeners who have the opportunity to grow plants for another year. In this case the seed was obtained from the well-known firm of Dicksons, of Chester.

Mr. Higginson sows his seed sometimes during June, in pans placed in frames or handlights in a cool position in the open air. Strict attention is paid to pricking out and potting on the young seedlings and plants before they become crowded or root-bound. Light sandy soil freely intermixed with leaf soil is used in the early stages, and at each successive potting the compost is made slightly heavier, a little well decayed manure being employed at the final potting. That arch enemy, green fly, is kept at bay by repeated fumigations before they have time to establish themselves, and by careful attention to the numerous other details of culture. Few plants will show the result of neglect more quickly than this type of Calceolaria, and neglect of any description means trouble with insect pests; but when skill and constant attention are bestowed upon them, then the "harvest" is a brilliant and fascinating one. All should bear in mind that now is the time to make preparations for next year's display.—H.

Tapton Grove, Chesterfield.

About two miles from Chesterfield lies Tapton Court, and at a recent visit we found Mr. Bloxham, the courteous head gardener, who readily placed his time at our disposal, and conducted us over the beautiful grounds. Entering a picturesque dell by crossing a stream, we found ourselves in a lovely spot by the lake, whereon disported waterfowls and majestic swans. The lake is well stocked with fishes, and one can fancy how pleasant it must be in summertime to board the boat, and to spend some time amongst the birds and these dwellers in the waters. Rising almost from the lake side is a stupendous bank, but along the foot we notice Lilies and Primroses and clumps of Narcissus (the month was May), while Pampas Grass is growing by the lake side, and an effort is being made to naturalise the bank with well-known flowers. Mounting by a winding walk, we come upon pieces of rockery, in which numbers of rock plants are growing. *Primula japonica* and *P. rosea* do well here, and are covered with bloom. American Cowslips, *Ericas*, &c., are dotted about, and one sees the *Fritillaria* also. Clumps of Ivy growing in, and covering tree trunks, are conspicuous.

The alpine garden is a pretty feature, and Grape Hyacinths, Saxifrages, Aubrietias, Azaleas, &c., luxuriate therein. Here one sees a very fine, soft Shield Fern fully 18in. across the crown. Throughout this garden water is laid from a spring some distance away, in such a manner that there is a constant trickling. Passing on, we notice Alpine Phloxes doing well, and there is a choice collection of Tulipas (species), including *retroflexa* and *fulgens*. *Arabis* has a pretty effect; *St. John's Wort* and *Berberis* are at home here; *Rock Cistus* and *Veronicas* all do well, and there is a fine collection of Daffodils. All the leading varieties of the latter are here, and some blooms secured honours at the Birmingham Show. We also noticed a very fine lot of Chrysanthemums, about 300 being grown, and Mr. Bloxham is a noted grower. Hybrid Primroses make a fine show, and evidently Sweet Peas are a favourite item.

Coming to the glass houses we find in the early vinery Muscat Hamburgh looking remarkably well, with fine growth, a good crop, and good bunches. In another house Hamburghs and Alicantes look very promising. Tomatoes are doing well, and show some fine fruit. The Tomato house was erected specially for these plants, and they are very flourishing. Peaches and Nectarines both show a good crop. In the stove there were a fine lot of *Calanthe Veitchi* coming away wonderfully strong; and of *Pandanus Veitchi* there are some grand table plants. *Abutilon Sanderianum*, *Crotons*, *Acalyphas*, *Anthuriums*, and a fine lot of *Gloxinias* (Peed's strain) are all good. A *Begonia*, *President Carnot*, in flower almost occupies one end of the house. There is a nice collection of *Caladiums*, including *Madame Groult*, *Jonville*, *Madame Fitz Kochlin*, *Raymond Lemoine*, and *Raoul Pugno* with its transparent leaves. On the roof are *Clerodendrons*, *Bougainvillea glabra*, *Plumbago rosea*, and *Allamandas*.

We noticed nice pieces of *Oncidiums*, *Dendrobiums*, *Cattleyas*, and *Begonia Godseffiana*. In a pretty fernery is an arch of tufa, in which *Adiantums*, *Pteris*, and *Rex Begonias* luxuriate, and it has a very pretty effect. By-the-bye, tufa seems to suit Ferns immensely; they seem to fairly revel in it. *Adiantum gracillimum* and *Asparagus*, and some fine baskets of *Davallias* are noticeable. In the flowering house were *Viburnum plicatum*, *Cyclamens*, Ivy-leaved *Pelargoniums*, *Souvenir de Charles Turner*, wonderfully good, nearly all across the top of the house; *Azaleas*, *Fuchsias* in flower on the roof, and a basket of *Lachenalia tricolor*, with an immense lot of flower, each call for special attention. We also noticed Sutton's Improved Telegraph Cucumbers doing well.

The Rose garden is a pretty spot, and reached from the terrace near the house overlooking the alpine bank of which we have spoken. Sweet Peas are, as we have said, a speciality at Tapton Grove, and clumps of choice varieties are numerous. The mansion is very prettily and pleasantly situated on an eminence. It stands in its own grounds of 120 acres, of which the gardens occupy about four. The lawns and shrubberies are very fine, some fine specimen English Yews are noticeable, being 30ft. high, and probably 30ft. through at foot, and are wonderfully well furnished to the ground. Two pillars of Golden Ivy on the lawn also looked well.

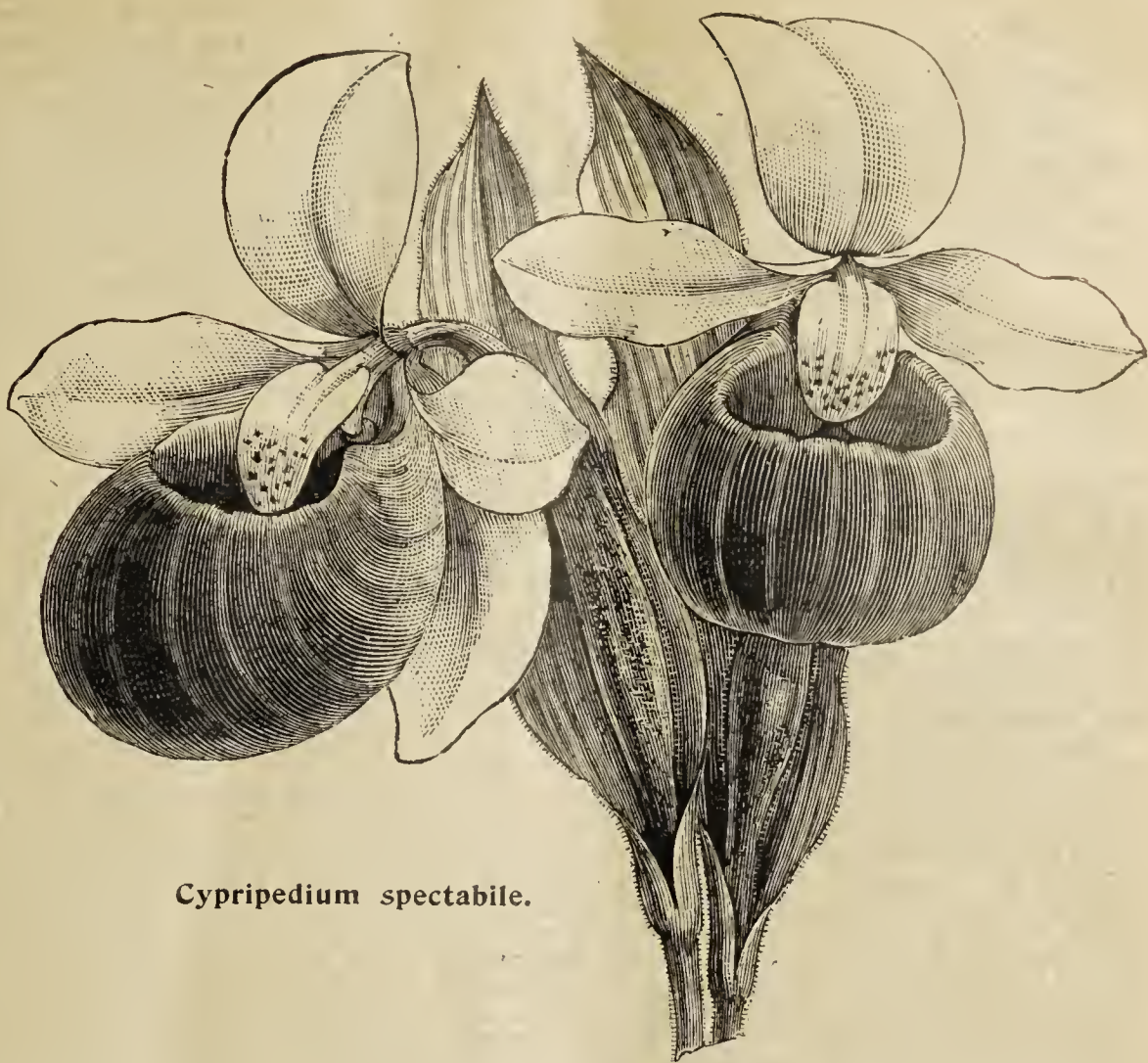
R. F. Mills, Esq., the owner of Tapton Grove, is an enthusiastic horticulturist, genial and pleasant. We were honoured by his presence, and were led to the conclusion that he takes a particular interest and pride in his grounds. He is a county councillor and member of the School Board, and is extremely popular in the district. Mr. W. R. Bloxham, the gardener, is secretary of the Chesterfield Chrysanthemum Society, and is enthusiastic in promoting the gardening charities, such as the Royal Gardeners' Orphan Fund, &c. He is a man of considerable experience, gained in such places as the Duke of Buckingham's at Stowe House; the Earl of Aylesford's, Packington Hall; thence to Moseley Hall, Birmingham, and he was three years at Shelton Hall, Newark, and seven years with the late Canon Sutton at Brant Broughton. He has been at Tapton Grove some fifteen years, and as he has practically had the modelling of the grounds here, he is naturally proud of the place. In local exhibitions, too, he has won a great reputation.—W. L.

The Old-fashioned Garden.

A great part of the charm of the really old-fashioned garden lies in the fact that in it we find plants and shrubs and trees not to be found in the orthodox gardens of to-day. Except in the really old-fashioned garden, how seldom do we come across that quaint old shrub known in the old days as Bladder Nut. Philip Miller, in his "Gardeners' Kalendar," written during the first half of the eighteenth century, speaks of it as such, and never thinks of adding its more classical name of *Staphylea*. In this old-fashioned garden, however, it is, during the sunny May days, in full blossom. The pretty pendulous habit of the creamy white flowers has much of gracefulness. It is true the shrub is not significantly conspicuous, but in some half shady place it proves a charming subject, and might well be more generally grown. I may add that it is tall growing, and not by any means particular as to soil or aspect.

Another old-fashioned shrub that those who appreciate highly decorative effects might introduce to give brilliant display during many weeks is the double flowered *Kerria*. It flowers in favourable seasons during the latter portion of March, throughout April, and well into May, while not infrequently the end of the summer will again see it in blossom. It flourishes best in some sheltered nook, or with the protection of a wall behind it. In the latter case, however, it should never be trained flat upon it, but should be allowed to retain its bushy habit, as it is far more artistic thus grown. This shrub increases very freely, sending up new shoots every year, and therefore once established, is easily increased. There is also a single form that has much beauty to recommend it.

Yet another old-fashioned shrub that should find a place in every garden where these old-time shrubs and plants are appreciated and treasured is the Allspice Tree, or, as more properly I should name it, *Calycanthus*. This is also a May-flowering shrub,



Cypripedium spectabile.

and if the deep purple flowers have no great brilliancy to recommend them, they make, at any rate, curious and interesting subjects. By the way, it always seems to me that in our up-to-date English gardens we rarely have regard to the quaint and curious, yet our sense for these is as acute almost as our sense of the beautiful, and is quite as worthy of being catered for.

But to return to the Allspice Tree, or, if I must, the *Calycanthus*. I know it growing in an old garden border, fairly moist, but in the full sunshine, and every year it is literally covered with blossom. I give these details, as there seems to be some difference of opinion as to its tastes. An old authority tells us "they must have the warmest situation and the driest soil that can be procured," while another writer of much later date tells us "they flourish best when somewhat shaded by other trees, and where the ground is damp." Between these diametrically opposite conditions I think we may conclude that they are not particular, and will grow almost anywhere. Practical experience goes to teach that it is perfectly hardy. It is very compact and neat in growth, somewhat dwarf, that is to say, attaining 4ft to 5ft in height, and not too dense in habit.

I have one more old-fashioned subject to speak of to-day, so beautiful, so full of old-world charm, and yet, methinks, too seldom seen—I mean the pink or crimson May tree. There are double and single varieties equally worthy of cultivation. Indeed, I go so far as to say that no garden of any considerable size should be without one at least of these highly decorative subjects. The habit of the *Cratægus* generally is very characteristic and distinctive. The trees should be allowed ample room in which to develop. It is far too effective to be half hidden amongst a crowded belt or group of trees and shrubs; and if it can be done, it is seen to the best advantage when it can be viewed uninterruptedly from its topmost branch to the point where the angular and distinctive stem or stems meet the soil.

Few old-fashioned gardens but will be able to boast their Medlar tree. I always think this a highly picturesque tree. It is effective in early May, when covered with its large white blossom, and then in early autumn, again, it is valuable, as being one of the brightest tinted among the lower growing trees. The leaves take on a glowing tone that is most effective, while the fruit, when viewed at close quarters, is quaintly artistic and effective, both in habit of growth and in contrast to the foliage.—F. M. WELLS.

Hand-list of Coniferae.

The second edition of the list of Conifers grown in the Royal Botanic Gardens, Kew, has recently been issued, price 3d. The present hand-list enumerates 246 species and 451 varieties, or some 700 "sorts" in all. A brief review of the literature dealing with Coniferae is published, extending to nineteen pages.



Gardeners' Commissions.

I am not going into this matter very fully, mainly because I have little to add to what has been recently well said by your several correspondents. One thing I am certain of, viz., that employers of gardeners very much magnify the amount of commission they think their gardeners receive. Another is that if gardeners as a body would but brace themselves up more and act prudently they would be better off in the near future if the whole affair was abolished for ever—I mean both in pocket and self-respect. There are many phases of this commission business. It is not confined to gardeners and other servants. As all men who have any insight into the affairs of life know very well, it affects the class in some of its forms who employ gardeners; aye! and in much bigger lumps than gardeners are supposed to receive. Let us clear the bits of dirt from our own doorsteps, I say, and then work as citizens to compel the larger heaps to be swept off.

What caused me to pen these notes was the receipt of a bulb catalogue from a well known firm in Holland. I enclose you a leaflet inserted therein. This leaflet is not in the catalogue sent by some firms to employers. Assuming that the Bill now before Parliament for abolishing secret commissions is passed and becomes law, how will it reach foreign bulb merchants and nurserymen? This is an important matter nowadays, when garden owners are each year sending more of their bulb and other garden orders abroad. My own employer told me some time ago that the bulb requirements must come from Holland this year. I have no doubt if I wished I could cause them to come from the firm alluded to; and yet no English nurseryman of any repute would dream of making me such an offer. At any rate, after nearly forty years' experience as a head gardener I have never received such a one. The main remedy for the disease is for garden owners and employers of gardeners to pay them a just salary according to their character, responsibility, and average success in results. Then extract from them a promise to take no fee from any business man or firm; penalty, dismissal, and the cause of it to be put on any certificate of character given. I could name places where the butler and gamekeeper's presents from their employer's guests averaged £20 per annum, and yet the gardener, who does a good deal to contribute to these said guests' pleasure and enjoyment, did not average £3 per annum in presents or commission. As I said before, there are many phases of this business. It is no secret that there are employers of gamekeepers who pay them a very small wage on the tacit understanding that they will receive a liberal amount in presents from the employer's friends, and yet no one condemns this sort of thing.—YORKSHIRE GARDENER, July 1.

Interesting Wild Plants.

It has always been a matter of the deepest interest to me to learn something about our wild plants. To many these humble subjects of our woods, waysides, and groves form a charm not to be even superseded by the more prepossessing exotics. Our young friends of botanical proclivities will be now keenly on the search for subjects, and a more pleasant pastime is difficult for me to determine. There is some reason for thinking this auxiliary to their profession is not so earnestly embraced by gardeners as it might be. Many of our young lads fail to see where the study of British flora has a bearing on other floras. However, a knowledge of their properties, habitats, and general characteristics, not to speak of higher technicalities, involving physiological or morphological science, is useful, and much is added to one's little word of happiness within himself.

The knowledge of the properties of plants must have given men an early subject for reflection; it does yet and probably will remain to do so for ages yet to come. The chemical combinations are so complex and in many cases so difficult to determine, that this form of chemical science may well be described as in its infancy. But apart from these considerations, it is extremely interesting to know as much as one can possibly acquire of the nature of a plant or plants. The poisonous and medicinal properties are ever fertile with interest. Almost every one of those have a history, some of them a tragic one indeed, and we never meet with the notorious Hemlock without the tragic story of Socrates arising. The meeting is both sacred and awe-inspiring, and the impressions which are necessarily precipitated tend to make us regard the Konian of the Greeks a subject of very doubtful friendship. Many are of the opinion that the Conium maculatum is not the Hemlock of the Greeks; but the Conium

is not the less powerfully poisonous. In some parts of the kingdom every typical plant of the same order is denominated Hemlock. The Water Hemlock (*Cicuta virosa*) is, perhaps, equally as powerful a poison as the Spotted Hemlock of notoriety, and so is also the Water Dropwort (*Enanthe crocata*), whose outstanding poisonous effects are tetanic in character. The common garden annual, and specially characteristic umbel-bearing plant, the Fool's Parsley, possess poisonous properties of no mean order as well. Its specific name, *æthusa*, from *aitho*, to burn, would in some measure indicate such properties. Though a knowledge of British plants is not absolutely necessary in the formation of the curriculum of the gardener, it is nevertheless a most desirable addition, and may in some cases be a most serviceable one.—D. L.

Back to the Land.

WHERE SMALL HOLDINGS PAY.

Expression of opinion is open to all, therefore I, as a disinterested yet interested person, may be allowed to make some remarks. I am not in any way connected with farming, although residing in a village that is supported by the land, and, moreover, live with a farm hand who is a living example of the type that "Briton" speaks about. Fully forty years on the farm, yet still earns a stipend of 15s. weekly. Intelligent enough, and cognisant with the various branches; but lacking that all-powerful item usually termed "go." And because of this missing quantity he will necessarily be compelled to work until he can do so no longer! Then what?

Personally I, like "Briton," am convinced that the small holdings are of more service, because a man who has managed to save a little money can take a few acres, be his own master, and be truly interested in his work, because it is to his benefit. There are several men about here who rent small holdings, not for tilling purposes, but cattle and sheep breeding, and their ever increasing stock is clearly an indication that a small place can be made to pay. But there are other ways of dealing with small holdings. To cultivate cereals on such is futile. The value of crops of such as Mangolds, &c., is insufficient. Therefore, growing for market is the opening that offers itself to men with a little capital and plenty of go. Fruit, certainly, is a worthy subject to take up, but the expense of planting two or three acres of land with trees is a considerable item. The fear of frost as referred to by "H. D." is also an item that cannot be overlooked, and two such seasons as the present and that of 1902 would certainly cripple any small man. But there are other details that are imported into this country which might well be grown at home. Something like 500,000 bushels of Onions were imported during the first five months of this year.

Is England unsuited to Onion culture? The private gardener can produce bulbs that for size would exterminate the imported Spanish. His ordinary specimens are fully equal to any that are brought over annually by those blue smocked, wooden clogged Bretons, who visit our towns and villages in all parts of the land. Therefore, why do not Englishmen take up Onion culture on an up-to-date scale? It should be up-to-date, however, not a mere surface-scratching-seed-sowing-without-cultivation affair. An expert on Onions in New York State deliberately states that 500 to 800 and even 1,000 bushels of bulbs may be secured from one acre of suitable soil. He himself has grown 800 bushels, each of which sold at one dollar, bringing in £166 English money. The total working expenses were \$295 (£59), to which were added cost of freightage and agents' fees—about 20 per cent.—this leaving a substantial profit on his working. Climatic and soil conditions are possibly more favourable than here, but I daresay that two-thirds of the above quantity could be grown on suitable soil! Celery also ought to be a paying crop. Referring to the States again, an expert says there is only one better paying crop than Onions, and that is Celery! It may interest readers to learn that much of the finest Celery in the States is grown by one firm, whose grounds are situated in California and Florida. This firm's products are despatched in refrigerator cars to all parts of the Union. When first started, the pioneer of this movement was quite a small man; now he is a millionaire. I am acquainted with one man who makes a speciality of about half an acre of Celery, and not the slightest trouble is experienced in disposing of it. His work is done entirely by hand, he and his sons doing it unaided, without ploughs and other quick agents.—A. W.

Sorrows of Gardeners.

We all have heard or read of "The Sorrows of Satan," but if the sorrows of his satanic majesty are greater than those of the humble gardener then he has my sincere sympathy. I challenge anyone to enumerate a trade which possesses so many drawbacks as does gardening. It appears as if everything in creation and out of it were in league to spoil the efforts of the individual who practises horticulture. No sooner does he bring forth the spade and the fork than he lays the foundation of a

monument of trouble. The soil may work kindly and the seeds are sown, with the hope that they may bring forth fruit. But do they? No sooner is the work completed than the weather puts in a word. It may turn to wet, it may be drought; one way or the other usually brings a like result. The innocent man plants his early Potatoes and everything desirable follows until the shoots are 6in high, then along comes the frost fiend, and the gardener reaps his sorrow. He may plant late, if dry weather ensues the plants hang fire; if wet is the order, then all haulm is the result. Then comes hot weather as at the present moment, and the gardener knows what will follow. "My 'spuds' have the blight," says one. "My *Solanum tuberosum* have become infested with *Phytophthora infestans*," cries another. He prays for rain at one period, he denounces it at another.

I shudder to think of what was said by the Strawberry growers who were suffering through the lavish supply of aqua pura recently. The Peas are in early and all looked rosy, then comes the slug, the fiend that it is, and away go the Peas; likewise the Beans, to say nothing of other things. One gardener will plant out his early Cauliflowers, the slug pays a visit, another does ditto, the rabbit makes a call. The result in each case is the same. We gaze upon the great display of fruit blossom, even upon the young fruits, but Jack Frost elips in and they go. We look at our Currant and Gooseberry bushes, and watch the buds fattening. Then another visitor calls, this time the bird; in fact, many of them. Should the fruits succeed in getting through, the birds are there again. Pears, Strawberries, Currants, Gooseberries, Apples, and Plums are all grist to their mill. He looks rapturously upon his breaking Rose trees and sees visions of prizes. The maggot is at work ere the leaf is fully out. Then comes the aphid, and perhaps the mildew. Some things the poor gardener can cope with, but the Currant mite is beyond him. The "Mum" rust thrives despite the sulphide of potassium. The Carnations give joy as the buds swell visibly, but the wireworm says nay, and the poor biped animal tears his hair in desperation. He watches his "Cues" growing cheerily, when flop they go, and he knows what is the matter. The Melons get as big as eggs, then they take to rotting off. The Tomatoes look well one day, the next they are limp, and the gardener mutters "fungi." So one might ramble on for ever, but little value would accrue. All gardeners know, and have felt, the meaning of sorrow; therefore they will join with me in stating Nature sometimes to be against the gardener.—A.

Begonias at Rocklands, Waterford, Ireland.

A few days ago I was afforded a great treat in being enabled to view the splendid collection of single and double Begonias at Rocklands, Waterford, the beautifully situated residence of John Newson White, Esq., J.P., who is a vice-president of the Waterford Horticultural Society and a most enthusiastic florist. I was very courteously shown through the houses and nicely arranged grounds by the head gardener, Mr. William Taylor, who is an adept at Begonia growing, and who has won many prizes for Begonia culture. The Begonia house is quite a new structure, erected for Mr. White by the celebrated firm of Messrs. Boulton and Paul, of Norwich. It is an ideal house for growing these charming flowers. Mr. Taylor showed me a lot of seedlings raised by himself: a single crimson one, the flowers being 8in in diameter; also a single crimson one with a white centre 7in in diameter; some beautifully fringed single seedlings; and a few magnificent seedling doubles, all being grown from seed saved by Mr. Taylor at Rocklands. I may say I have never seen a finer collection of seedlings.

Amongst the double named varieties I particularly noticed Mrs. Stothert, a beautifully grown yellow, Camellia-shaped flowers, the flowers being 5½in in diameter and 3in deep; Leviathan, dark rose, charmingly coloured, and of robust habit; Duke of Fife, a clear rose colour, beautifully crimped; Princess of Wales, very large erect flowers, beautiful blush pink colour; Henshaw Russell, flowers very large and full, beautiful scarlet; very erect form; Felix Marcotte, a dazzling velvety scarlet, flowers large and splendidly shaped, very compact; Mrs. French, free flowering, sulphur white, large full flowers, very vigorous; Rosebud, soft pink and very nicely shaped, one of the best pinks I have seen; Duchess of Fife, silver flesh colour, large flowers; Nurse Mary Cornell, very large, well formed flowers, beautiful salmon shaded pink; Lady Ashbrook, a strong grower, clear deep yellow, splendidly formed flowers, one of the best double yellows; Miss Edith Childs, immense flowers, Camellia-shaped, beautiful blush white; Madame La Baronne de Saint Didier, strong habit, immense full flowers, pale yellow. The best of the single varieties were Surprise, large flowers, deep velvety crimson; White Perfection, very erect flowers; Mrs. T. Lunt, an enormous light salmon; Prestige, enormous rich crimson flowers; Boule de Feu, large bright orange scarlet; Champion, large deep bronzy yellow.

Mr. Taylor has a magnificent house of single and double Zonal

Pelargoniums. Some of the plants measure 3ft in diameter and 9in from top of pot, grown in 8in pots. Some of the trusses are 8in across. He has a good show of Tomatoes, the variety being Winter Beauty; I saw some remarkably fine bunches of fruit.

Gloxinias are cultivated right well at Rocklands; I counted as many as sixty flowers on one plant, the plant measuring 2ft across. There is also a beautiful new conservatory attached to Mr. White's dwelling house. It is extremely gay at present with Cannas, Pelargoniums, Gloxinias, Orchids, Adiantums in variety. There is also a very fine house of Black Hamburg Grapes well and carefully grown. The kitchen garden is well stocked, and in my humble opinion is a model of what a well kept garden ought to be. The whole concern reflects the greatest credit on the capabilities of Mr. Taylor, and I only wish some of the wealthy ladies and gentlemen around Co. Waterford would endeavour to try and emulate the example shown at Rocklands.—J. A. P.

Fruit and Vegetables: Early Summer Crops.

There always attaches an interesting anxiety when one peruses the record of past and former years, and compares the maturity of the first fruits of the current season. That which affects 1903 will be interesting, though so intensely disappointing, because the reverses have been so many and frequent. It is, indeed, an interesting study, these comparative records extending over a series of years; and gardeners nowadays are afforded such excellent means of chronicling the returns of progress month by month in the presentation calendars given gratuitously by many of the leading seedsmen, that there ought to be no serious hindrance to anyone getting accurate information bearing on the question. On reference to diaries of some years now gone, I find 1893 contrasts most by its earliness of the summer crops. This, it need not be remarked, is entirely due to the weather in the early months of the year. Unfortunately of late the experience of cold winds, occasional or frequent frosts, varying in their severity, and absent sunshine all tend to make impressions on the memory which cannot so easily be obliterated—at any rate, from the gardener's mind.

This is not so true of the cook, or, indeed, often that of the mistress, for a week of sunny weather like that which followed the disastrous flood time of June, gives cause for inquiries after Peas and Strawberries, Cherries and Cauliflowers, just as though the maturity of crops were as spontaneous as is the alternate cloud and sunray. An instance bearing out this remark was made quite recently by an employer to his gardener. His written message was, "When are we to have Peas and other summer vegetables? I know the season has been bad, but here we are June 26 and all I see is the same old Potatoes and Cabbages." In this case, it seems, Asparagus did not count, and Turnips, Carrots, Spinach, and forced Beans were beneath notice. The yearning for home-grown garden Peas crushed these minor vegetables out of thought, and thus the gardener, anxious though he evidently was to gather the first Pea pod, had to learn how to digest hard words, and to wonder why the elements had dealt so hardly with him.

Comparing this season's crops with that of 1893, I find in our case there is from a fortnight to almost a month's difference in gathering the first. Peas then were ready May 30, this year June 26 furnished the first dish; yet though a similar variety and quite as early a start was made, the pods required a month longer to fill with the longed-for Peas. Exactly three weeks marked the difference in the Strawberry crops of the two years, and the same span divides the Raspberry. Currants are still (July 4) in a parti-coloured state: in 1893 they were full ripe by June 19, and Black Currants were ready on the same date. Dessert Cherries are late, and Morellos are in a similarly backward state. Much fruit, which until recently had given a favourable hope, now changes to a state which bespeaks failure. Black fly has been a source of much more than ordinary trouble; it pays its annual visit always, this year it behaved with persistent obstinacy.

Comparison has been made between the first and last years of a decade, 1893-1903, by stepping backward one season the unfavourable aspect of the present year, so far as it affects time, does not seem so striking. There is a gain of ten days in Raspberries in this over last year's record, and a corresponding march of time in Red and Black Currants. Strawberries, too, would show a material advance. It will be remembered that the spring of last year was extremely cold, winds coming from the north-east for so long a time, and frosts of a destructive nature being somewhat frequent in the month of June. Plums are so short that competition for time will be scarcely challenged, and Pears have had no chance at all. There are fewer actual fruits at the present time than there were bushels last year on the same ground. Employers and cooks will need many reminders of the spring frosts this summer, autumn, and winter: but all the debating in the world will not replace them, nor fill the fruit room shelves.—W. S.

Flowers of the Season.

As each month comes round the garden may lose some of its fascinations, but, on the other hand, it receives fresh accessions of beauty. June seemed no less charming than May; and now July is as delightful as the months which have gone before. Nay, she is more charming in some ways, for the weather is more gracious both to our flowers and ourselves, and we are enchanted with all around. The breezes are soft and warm, and we can sit in the garden and list to the sounds they make among the trees and the plants, as they seem to sing the praises of the flowers among which they pass with their gentle breath, stealing meantime from the blossoms the fragrance they exhale. And we can sit and delight ourselves with the many flowers which around and about are the silent witnesses of the Great Power which calls them forth from Mother Earth to deck the world—even this little spot of ours we call a garden—with the forms of beauty we see beside us.

There are Roses many and of the most glorious beauty. It is true that the queen of flowers has smiled upon us with less urbanity than is her wont. The winds of spring were less benign with this sweetest flower than she deserved, and so she has been unable to yield to the full her greatest bounty. Yet we expect that when autumn comes she will more than compensate for our present loss; and it must be said that had we not known the profuse gifts the Rose can give us in favoured years we had not felt any disappointment at all, for truly there are Roses in plenty with us now. Hybrid Teas and Teas are less plentiful, but others have been impressive in their loveliness. It is for the rosarian, however, and not for me to tell fully as ought to be told the impressive beauty of the Rose in all her forms. She is the *summum bonum*; the perfection of perfections; the gift of gifts to the lover of flowers.

The regal Lily, too, has entered upon that annual conflict of which the poets have told. One should hardly call it a conflict; for rather is the Lily the companion than the challenger of the Rose for pride of place. One may adopt the imagery of Percival, who turns the languages of flowers into verse, and says:

The Rose is a sign of joy and love,
Young blushing love in its earlier dawn.

And of its companion the Lily:

Innocence shines in the Lily's bell,
Pure as the heart in its native heaven.

If we look upon them thus we shall acknowledge that, as the Rose symbolises joy and love, the Lily the symbol of innocence, is therefore an inseparable associate of our queen of flowers. She has come to us in other forms at first, but it is in *Lilium candidum*, the Madonna Lily, that we have at this season the embodiment of the graces and beauties of this flower.

Then we have the Iris with us as well. The Flag Irises of the *barbata* section have been somewhat churlish in their gifts of flower this season, but there are yet others which have been more liberal. Perhaps of them all, the English Irises have been finer than usual, and as the month of July begins we are delighting in these shapes and colours of loveliest beauty. Had we never had the Rose and the Lily, the Iris would have stood high in the lists had we to choose among our hardy flowers for a royal plant. Whether or no it was the ancient fleur de lis under whose banner was enrolled so much of the chivalry of past days, it is a noble flower and impressive in its charms and graces.

We must also rejoice in the Campanulas. Some are well named, for they are graceful Campaniles, supporting noble bell-like flowers on which we might fancy the fairies and sprites sounding the chimes to welcome in the opening day. In them by day the bees sound forth their booming notes as they seek for nectar in these shapely flowers of blue, of purple, or of white. Such are the noble Campanula *persicifolia grandiflora*, the chaste *C. persicifolia alba grandiflora*, the salver-like flowers of Campanula *grandis*, or the fine purple or white bells of *C. latifolia macrantha* and *C. latifolia macrantha alba*. Then there are the dwarf members of the race, such as *C. pumila* or the fine purple-blue blossomed *C. Portenschlagiana grandiflora*, as we ought to call the "Bavarian" form, delightful just now hanging from a rough wall or veiling the stone steps of the ascent to a small roof garden.

There are also stately spires of the noble Delphiniums, with the lighter but equally beautiful spikes of some of the species untouched by the modifying hand of the hybridist. It is needless to name these hybrid Delphiniums, for are not their names familiar to the readers of our Journal who read the accounts of the Kelwayian and French perennial Larkspurs? Then there are the sulphur yellow of *D. zalil*, the orange-red of *D. nudicaule*, and the various colours and shades given by others more or less distinct.

In the Cistuses and Helianthemums we have true children of the sun; more correctly, one might say, perhaps, "children of the morning sun," for most of them open with the early hours, and have lost their beauty ere king Sol has sunk far past his meridian. Here is a noble bush of *Cistus laurifolius*, more than 6ft high, and at present spangled with fine white flowers. In a

day or two it will be well nigh covered with them. Here, again, is *C. albidus*, and there *C. salviæfolius*, both pictures of loveliness; while the dwarfer Helianthemums, or Sun Roses, have not yet donned for the year the sober grey garments in which they seek obscurity when their time of beauty has gone by.

Then with fragrance unspeakable is not the garden dowered by the Carnation and the Pink? The Carnation is dearer to the heart of the specialist in these flowers than to many, but all must acknowledge its loveliness and its sweetness. And the Pink in its many forms has devotees many; from him who spends his time and lavishes his affections upon the laced ones or the chaste white and coloured border varieties, to him who studies with earnestness and devoted admiration the numerous species dear to the heart of the hardy plantsman or the "alpinist." All these forms are here, and all are lovely; though, it must be said, even if with bated breath, that all are not fragrant with that sweet odour which is the special gift of so many of these Pinks.

And as we look around at other flowers the eye wanders with pleasure from plant to plant, scanning their beauty or lingering upon some of more than ordinary charms or interest. Here is a group of the hybrid *Mimulus Burnetii*; there, by the Water Lily pool, a patch of *M. luteus* and one of *M. cupreus* Brilliant. The Nymphaeas themselves have come into loveliness, and open their charms to the admiration of the brilliant sunshine. Beside them are some of the Spiræas, or Meadow-sweets, giving their masses of plume-like flowers in profusion. Delightful are they, whether flourishing well in a dry one, as is the manner of the bright little crimson-flowered shrubby *S. bullata*, now coming into bloom, or in a moist one, as is the way of *S. palmata* or the noble *S. aruncus*. We gaze upon bright hardy Geraniums and Erodiums; upon Alströmérias, or on the spiny-looking but lovely Eryngiums. In the borders and about the rockeries are many Violas of all colours we find among the race, while Poppies flaunt their great blooms among the other flowers. Valerians give their unimposing racemes of blue or white, and Veronics are masses of blue, either in carpet on the rockeries or in upright clumps in the border. The earliest annuals have begun, and help the effect of the many other flowers. Over all is the sun, flooding the garden with brightness and light. Each plant is a study of light and shade, each flower a vision of loveliness. Truly Summer brings with her bounties for all of us; and none have more cause to bless her than those who love their gardens and cherish their flowers.—S. ARNOTT.

Cryptomeria elegans.

Amongst the many beautiful Conifers from Japan this is, without doubt, one of the most ornamental, easy of propagation by cuttings, cultivation, and hardy. It is not particular as to soil and situation, bearing also with impunity sharp frosts, boisterous winds, and heavy rains; in fact, it revels in plenty of moisture, but to bring out its bright and rich colouration, the best conditions are a light porous sub-soil, and an airy, sunny situation, with plenty of room for development. In the earlier stages of growth a certain manipulation of its branches should be practised to ensure an upright and symmetrical habit of growth, as it has a strong tendency to produce a multiplicity of leaders and straggling lateral branches, giving the plant an irregular and unsymmetrical contour. To form the main stem, the central leaders should alone be preserved, and the duplicate ones, with all straggling laterals, well pinched back; whilst all branches up to, say, 6in or 8in. at the base of the main stem, also any suckers should be cut away entirely. This *Cryptomeria* was discovered in 1863 by the late Mr. John Gould Veitch. There is a large proportion of the species belonging to the different genera of the Conifers distinguished for their alternation of foliage colouring, but none more so nor more striking than the subject in question, which assumes in the late autumn and winter season a rich bronzy red colour on the exterior stems and foliage exposed to full sunlight, whilst the shaded portion retains the ordinary green colour, thus rendering the plant, whether growing singly or several in a group, a most conspicuous and ornamental object, not surpassed by any other evergreen tree or shrub. Planting them *en masse*, however, is hardly to be recommended, as if planted too closely together the contour of the plant is destroyed.

One of the finest specimens known in England (according to Veitch's "Manual of Coniferae") was at Linton Park, near Maidstone, in 1881, being 20ft. in height, and, according to the excellent illustration, it must have presented a fine and remarkable appearance. The author says that *C. elegans* was first discovered by the late Mr. John Gould Veitch, who met with it only in cultivation in the neighbourhood of Yokohama, but he had never known of its growing in a wild state. There is said to be a form of it called *C. elegans nana*—a low, dense, bushy shrub, with leaves more crowded than the preceding, which retains all the intensity of the glowing crimson hue of *C. elegans* during the winter months, with the exception of the pendulous tops of the branchlets, which continue green. The resemblance of *C. elegans* during the growing season to *Araucaria Cunninghamii* is very apparent.—W. G.

NOTES

NOTICES

Cambridge Botanic Garden Report.

The Botanic Garden Syndicate (Cambridge) send us a copy of the annual report to the Senate, which shows progress, and a successful year's work.

Eucalyptus in Flower.

At Courlands, Lostwithiel, Devon, are two Eucalyptus trees now in full bloom, this being the sixth year they have flowered. One of these trees is considered the largest in Cornwall, and one of the largest of its kind in England.

Huge Fruit Arrivals.

During the present season about one and a half million cases of Oranges were shipped to London and Liverpool, chiefly from Valencia and Murcia. This is the largest output known to the trade. Those that are obtainable are making from 20s. to 30s. a case of 420 fruits. These are phenomenal values. The shipments of Apples from Tasmania and Australia have been considerably larger than ever.

The Midland Carnation and Picotee Society's Show.

We had a committee meeting of the above society on July 2 to fix the date of the forthcoming exhibition, and owing to the lateness of the season it was decided to hold the exhibition as usual at the Edgbaston Botanical Gardens, Birmingham, on Thursday and Friday, August 6 and 7. If you would kindly mention this in your next issue we should feel very much obliged.—HERBERT SMITH, 87, Drayton Road, King's Heath, Birmingham.

June Weather at Belvoir Castle.

The prevailing direction of the wind was north, total ten days. The total rainfall was 2.08in, this fell on nine days, and is 0.04in below the average for the month; the greatest daily fall was 0.63in on the 14th. Barometer (corrected and reduced): highest reading, 30.457in on the 4th at 9 a.m.; lowest reading, 29.630in on the 15th at 9 p.m. Thermometers: Highest in the shade, 81deg on the 27th; lowest, 34deg on the 4th; mean of daily maxima, 62.86deg; mean of daily minima, 45.83deg; mean temperature of the month, 54.34deg; lowest on the grass, 30deg on the 4th; highest in the sun, 129deg on 26th, 27th, and 28th; mean temperature of the earth at 3ft, 53.43deg. Total sunshine, 167 hours 30min, which is 13 hours 50min below the average for the month; there were four sunless days. The mean temperatures are all much below the average for the month.—W. H. DIVERS.

Ipswich Gardeners' Outing.

The annual outing of this society took place in glorious weather on Saturday, the 27th, when some seventy or eighty members of the craft visited Ackworth Park, East Bergholt, the residence of A. Harwood, Esq. The house is situated on high ground overlooking the valley of the Stour, which is noted for its beautiful scenery, always associated with the name of Constable, the great landscape artist. A broad expanse of lawn reaches up to the house and gradually slopes away down to the Rose garden, furnished with lovely arches of climbing Roses, and beds of all the best H.P.'s, H.T.'s, and Teas. Beyond the rosery a well-stocked herbaceous border forms an item of interest to lovers of this class of plants. The conservatory attached to the mansion was bright with Gloxinias, Begonias, Streptocarpus, Streptosolen Jamesoni, &c., all arranged with excellent taste. A new range of houses in the kitchen garden contained a vinery in which excellent examples of Black Hamburgh and Foster's Seedling Grapes had nearly finished colouring; a small house with Peach trees in pots bearing good crops, a stove, and a greenhouse, the latter containing a promising lot of Begonias. In the kitchen garden cleanliness and good culture were much in evidence; Strawberries were a good crop, other fruit crops very short, the general rule throughout Suffolk this season. The head gardener, Mr. Hicks, deserves great credit for the excellent order in which the various departments of the establishment are kept.—E. C.

Gardening Appointment.

Mr. F. Jackson, as head gardener to J. Spencer Phillips, Esq., of The Mount, Shrewsbury.

The 1903 Sweet Pea Show.

Evicted from the site of their former yearly displays, the National Sweet Pea Society will hold their third grand exhibition at London's popular resort, Earl's Court, on the 15th and 16th inst. On both days the spacious Prince's Hall at the Warwick Road entrance, picturesquely arrayed with varieties of the Sweet Pea from all parts of the kingdom, will be open entirely free to visitors to the International Fire Exhibition. In addition to the numerous prizes offered in the recognised classes, the National Sweet Pea Society' silver medal will be given for the finest novelty of the year.

Failure of Fruit Crops.

The failure of the fruit crops in the Driffield (Yorks) district is general, excepting some of the "soft" fruits, such as Strawberries and Gooseberries. The former give promise of a considerable yield; they have developed slowly because of a lack of sunshine and the necessary warmth, which has now been imparted to the soil, and the crop is growing splendidly. Of Gooseberries the supply will be shorter than usual, and the price is keeping high, the berries being sold at 2½d. and 3d. per pound retail. Black and Red Currants and Raspberries have done badly; but worst of all are the standard fruit trees, which are almost a dead failure. Such a state of things has not been experienced for thirty years. Trees which bore thirty stones of Apples last season, and had never been known to fail, are this year without fruit, notwithstanding the early promise of a more than average yield, the trees, as a rule, being full of lovely blossom. The same observation is applicable to Damsons, Plums, Pears, and Cherries.

Temple House Gardens, Great Marlow, Bucks.

The rainfall here for June, 1903, was 6.59in. Rain fell on ten days during the month. The heaviest fall in twenty-four hours was 1.73in, which beats my record. The floods did much damage here, a portion of the park and gardens having been entirely under water, and men worked day and night pumping water out of the stokeholes. Most of the allotment produce has been severely damaged, and the Potato crop ruined. Several Conifers and deciduous trees that were planted on boggy soil are entirely uprooted, and lying on the ground. The maximum temperature for June, 1903, was 74deg on the 26th, and the minimum 38deg on the 21st. The maximum for 1902 was 79deg on the 29th and 30th, and minimum 36deg on the 9th. The rainfall for June, 1902, was 3.42in.—G. G.

Strawberry Cultivation.

The bed of specially prepared Strawberry plants in the Western Gardens, shown by Mr. J. F. Williamson, of Summer Hill, Mallow, Ireland, who makes a speciality of them, is now in grand condition, and should be seen by visitors to the Cork Exhibition. The varieties shown are Royal Sovereign, Leader, Laxton's Fillbasket (an extraordinary cropper), Trafalgar, Latest of All, and Louis Gauthier. His plants are grown from the earliest runners, and undergo special cultivation whereby the crowns become fully matured and ripened, and the roots grow out naturally from the very beginning. The value of Strawberry plants should be judged by the robustness and plumpness of their crowns rather than by the luxuriant but unmatured leaf growth, which so frequently results in barrenness the following season. As a rule, yearling plants thus raised can be relied upon to give as large a crop as ordinary runners do when they are two or even three years old. Latest of All is proved here to be the most prolific variety in cultivation, a single plant having produced the extraordinary crop of eighty-one berries, weighing 21oz, as a yearling, and 132 berries, weighing 29oz, the following season. The variety Louis Gauthier, though not of such an attractive appearance, being an albino, as some of the other varieties, attains a very large size, and the flavour is exceptionally fine. This variety is specially recommended, as it bears very heavy crops, and if given plenty of room, and the spring bloom be removed, it throws out a quantity of runners, and if these be pegged into the ground the probability is that many of them, together with the parent plant, will bear a fair crop late in the autumn.

Societies.

Royal Horticultural Society, July 7th.

The Drill Hall was much more bare than usual, not only of exhibits, but visitors also; doubtless the visit of the French President had much to do with this. Orchids were sparsely represented, while in the fruit division the Pines and Strawberries were the chief feature. It was left to the floral section to produce the display.

Orchid Committee.

Present: H. J. Little, Esq. (in the chair); with Jas. O'Brien, de B. Crawshay, H. T. Pitt, W. Boxall, M. Gleeson, W. H. Young, E. Hill, H. A. Tracy, W. H. White, and H. A. Bilney.

Mr. W. H. Young, grower to Sir F. Wigan, Clare Lawn, East Sheen, contributed half a dozen Orchids, consisting of *Sobralia Wiganiae*, *S. Veitchi aurea*, *S. macrantha*, *S. sanguinea*, and *S. xantholeuca*; also *Cypripedium Godefroyae leucochilum*.

Messrs. W. Bull and Sons, King's Road, Chelsea, exhibited a small collection of *Anætochili*, which were well grown, and included *A. regalis*, *Hæmaria Dawsoniana*, *Macodes petala*, and *Dossinia marmorata*.

Floral Committee.

Present: H. B. May, Esq. (in the chair); and Messrs. C. T. Drury, Geo. Nicholson, John Green, J. F. McLeod, Jas. Hudson, J. Jennings, W. Howe, G. Reuthe, Chas. Dixon, H. J. Cutbush, Geo. Gordon, H. J. Jones, R. W. Wallace, Chas. E. Pearson, C. E. Shea, W. P. Thompson, E. H. Jenkins, and Amos Perry.

Messrs. Jas. Veitch and Sons, Limited, Chelsea, made a nice display of Sweet Peas grown in pots and trained in barrel form. The plants were nicely flowered, the best being Sadie Burpee, Mars, Black Knight, Gorgeous, Lady Grisel Hamilton, Katherine Tracy, Miss Willmott, and Navy Blue. A fine collection of *Campanula peregrina* in pots also called for attention; the plant appears to possess considerable merit as a decorative subject. The same firm also exhibited baskets of the following flowering shrubs:—*Cytisus schipkaensis*, *Cytisus nigricans*, splendidly flowered, *Stuartia pseudo-Camellia*, *Escallonia langleyensis*, a bright rosy red, and *E. Phillipiana*, a free flowering white form. A box of the well-known *Rhododendron* hybrids was staged in sixteen varieties. A fine group of *Cannas* and *Carnations*; the former were well flowered, while the latter consisted of the Tree and Malmaison types, the chief being Wm. Robinson, Lady Rose, Robert Burns, Lord Rosebery, Mrs. Trelawny, King Oscar, Princess of Wales, John Coles, Thora, and Albion. Mr. R. Anker, Addison Nursery, Kensington, contributed a display of Cacti, many of them showing flowers.

Messrs. Barr and Sons, Covent Garden, made a pretty display of early flowering Gladioli, Irises of the Japanese type, with a few water Grasses. The most prominent Gladioli were Favourite, Colvillei roseus, Peach Blossom, Mathilde, and Mackintosh.

From Messrs. J. Cheal and Sons, Crawley, came a nice exhibit of cut Sweet Peas; the blooms were clean and bright, and embraced fifty-eight varieties, the most prominent being Captivation, Prince of Wales, Stanley, Blanche Burpee, Blanche Ferry, Aurora, Miss Willmott, Grey Friar, Alice Eckford, and Mrs. Joseph Chamberlain.

A nice exhibit of cut Carnations came from Messrs. W. Cutbush and Son, Highgate; the blooms were large and in first-rate condition, the chief being Cecilia, Claverhouse, Mrs. Trelawny, Grace, Wyvern, Shiela (grand), Sabrina, Don Juan, Admiral, Nautilus, Monk, and Maggie Hodgson.

The Rev. W. Wilks arranged three vases of Shirley Poppies to show gradual increase of yellow, pink, and salmon shades in the colouring. Needless to say, the exhibit clearly demonstrated the great strides that are being made in this strain.

Hardy flowers were splendidly staged by Mr. M. Prichard, who had a large exhibit rich in uncommon and rare plants; some of the most noteworthy were *Spartium junceum*, *Campanula Burghalti*, *Achillea eupatorium*, *Clematis integrifolia*, *Spiræa venusta*, *Delphiniums* in variety, *Astilbe Silver Sheath*, and a few nice *Nymphæas*. A nice collection of Japanese Irises completed the display.

Messrs. T. S. Ware, Limited, Feltham, occupied a table running the entire length of the hall, the exhibit being noteworthy for the collection of *Delphiniums*; in these were noted Miss Gladys Batchelor, Mrs. Clifton Robinson, White Pearl, Nora Hollies, Neptune, Shelley, Copernicus, and Cerberus. In the herbaceous plants were noted *Lilium Hansonii*, *L. japonicum*, *Alströméria chilensis*, *Spiræa Aruncus*, *Verbascum phlomoides*, *Geranium pratense flore-pleno*, and *Lilium maritimum*; while two spikes of *Eremuri* attracted a lot of attention—*E. Wycliffe*, a canary yellow, and *E. Sybil*, an orange form.

From Mr. H. B. May, Dyson's Lane Nursery, Upper Edmon- ton, came a grand display of Crotons, ranging from nice specimens to decorative plants in 5in pots; the plants were remarkable for their rich colouring. They were beautifully arranged with Palms and Ferns. A few of the best were *C. Prince of Wales*, *Elysian*, *Lord Wolseley*, *B. Comte*, *Andreanus*, *Emperor*

Alexander III., *Sunrise*, *Comte de Germiny*, *Thomsoni*, *Reidi*, and *Grandis*.

Messrs. J. Peed and Son, West Norwood, made a nice semi-circular group of Carnations in pots edged with variegated Grasses. The chief varieties represented were Cecilia, Princess of Wales, Mrs. Trelawny, Lily Measures, Nell Gwynne, Maggie Hodgson, and The Marchioness.

Mr. E. Potten, Camden Nurseries, Cranbrook, displayed hardy flowers and a pretty new Polyantha Rose named Schneewittchen, which appears to be a good variety; in colour creamy white, with a little buff in the centre. Irises Monieri and *I. orientalis gigantea*, *Delphinium Arago*, *Gaillardia grandiflora*, *Potentillas* in variety, and *Inula glandulosa* formed the chief features.

Mr. J. Douglas, Great Bookham, arranged a few nice vases of Carnations comprising many varieties.

Miss Willmott, Warley Place, contributed two baskets of *Verbena Warley*, a deep crimson, very floriferous, and exhibited in good form; also three well flowered plants of a new *Lilium*.

Mr. Amos Perry, Winchmore Hill, again displayed a collection of hardy flowers, with a choice collection of *Nymphæas*. Chief of the hardy flowers were *Ostrowskia magnifica*, *Delphiniums* in variety, *Iris juncea*, *Campanulas*, *Calochorti*, and *Liliums* in variety. The *Nymphæas* included examples of *N. Robinsoni*, *N. M. albida*, *N. lucida*, *N. Gloriosa*, *N. aurora*, *N. Laydekeri purpurata*, *N. M. carnea*, *N. Wm. Dooze* (a grand white), *N. Gladstoniana*, *N. M. chromatella*, and *N. Ellisiana*.

Roses were represented by Messrs. B. R. Cant and Sons, Colchester, who made a beautiful display of Teas arranged in vases. The chief varieties were Madame Jean Dupuy, Mrs. B. R. Cant, Duchess of Portland, Liberty, Madame A. Chatenay, Frau Karl Druschki (in grand form), Papa Lambert, Mildred Grant, Madame Ravery, Mrs. E. Mawley (of grand colour), Lady Roberts, Killarney, Georges Schwartz, Morning Glow, and Lady Moyra Beauclerc.

Fruit and Vegetable Committee.

Present: G. Bunyard, Esq. (in the chair); with Messrs. J. Cheal, W. Bates, S. Mortimer, A. Dean, T. Coomber, C. G. A. Nix, Jas. Smith, F. Q. Lane, G. Wythes, Jas. H. Veitch, A. H. Pearson, H. Balderson, and H. Esling.

Messrs. H. Low and Co., Bush Hill Park, sent a well fruited tree of White Marseilles Fig, and a good pair of pot Vines, both, however, quite unripe.

Mr. Thos. Coomber, gardener to Lord Llangattock, The Hendre, Monmouth, staged eighteen Queen Pines in grand condition, the fruits being large and splendidly developed. The same exhibitor also staged a dish of Peaches named Raymaekers, large and splendidly coloured.

From Messrs. G. Bunyard and Co., Maidstone, came a collection of twelve varieties of Strawberries, arranged in Leedham's patent baskets. The varieties were President, Royal Sovereign (grand), Trollope's Victoria (which travelled badly), Sir Joseph Paxton, Louis Gauthier (as bilious looking as ever), Waterloo, Leader, Monarch, Goliath, Trafalgar, Walluff (fine size), and Dr. Hogg.

Messrs. Veitch and Son, Exeter, sent a fine dish of Western Express Pea, also plants of the same variety; the pods were large and well filled. Messrs. W. Cutbush and Son, Highgate, sent a Melon Incomparable. From the Horticultural College, Swanley, came four well grown Melons, and a nice dish of Lady Sudeley Apples, the latter being of good size and well coloured. Mr. Geo. Fowler, 78, Bank Street, Maidstone, exhibited bottling appliances, also samples of bottled fruit.

Medal Awards.

ORCHID COMMITTEE.—Silver Banksians for groups of Orchids to Messrs. W. Bull and Sons, Chelsea, and Sir F. Wigan.

FRUIT COMMITTEE.—Silver-gilt Knightian to Lord Llangattock, Hendre Gardens, Monmouth, for eighteen Pineapples, the Queen.

FLORAL COMMITTEE.—Silver-gilt Flora for group of Malmaison Carnations, &c., to Messrs. J. Veitch and Sons; for Carnations to Mr. H. B. May, Upper Edmon- ton. Silver Flora for hardy flowers to Messrs. R. Wallace and Co., Colchester. Silver Banksian for hardy flowers to Mr. M. Prichard, Hants; for cut flowers to Messrs. T. S. Ware, Limited, Feltham; for *Verbena Warley* to Miss Willmott, V.M.H., Warley; for Carnations to Messrs. J. Peed and Son, West Norwood; for hardy plants to Mr. A. Perry, Winchmore Hill.

Certificates and Awards of Merit.

Campanula Peregrina (Veitch and Sons).—A plant of fine decorative habit, growing about 2½ft. Flowers light blue, deepening towards the edges of the petals, with a distinct purple disc. A.M.

Carnation Diadem (Messrs. Cutbush and Son).—A yellow ground, heavily edged with rose; calyx good. A.M.

Carnation Merlin (Cutbush and Son).—Fine yellow ground, heavily marked with crimson and chocolate; large, and a capital calyx. A.M.

Melon, President Loubet (J. Snell).—A nicely netted scarlet-fleshed variety of medium size and fair flavour. A.M.

Nephrolepis cordifolia crispata congesta (H. B. May).—A variety of more interest to the botanist than to the horticultural fraternity. A.M.



Lilium Martagon and its white variety.

The Martagons form a sub-genus of *Lilium*, and are mostly distinguishable by their turn-cap, or Turk's-cap shape, *L. canadense* being a marked exception. We figure the typical purple *L. Martagon* and its rare and chastely beautiful albino form. *L. chalcedonicum* is a common and popular representative of the group. Martagons, in general, make no stem roots, hence they should not be planted deeply, but the soil should be deep, for they root straight down. A loamy tilth, and a cool, damp place suits them admirably.

Hanley Horticultural Fête, July 1st and 2nd.

This was the seventh annual flower show in Hanley Park, and Mr. Joseph Kent, the energetic secretary, whose efforts have contributed so much to its success, is to be congratulated on the remarkable success which attended it. Judges who had been present at all the series said it was the best all-round exhibition yet held. The group tent, in which seven were arranged, was a show in itself; but one could not but regret that all the seven were arranged pretty much upon the same lines, the ground plan being similar in all. This is now becoming a stereotyped method at all our large provincial exhibitions, and it may soon become necessary to offer special premiums for some new and novel designs, or visitors will tire of the monotony of arrangement. There were huge specimen plants, foliage and flowering, Orchids and Carnations, good fruit and vegetables for the season, charming floral decorations, and many fine features in the way of miscellaneous exhibits, with a wonderful exhibition of plants, flowers, &c., by children, while the Rose tent surpassed all expectations in the extent and quality of the flowers staged. There was an interesting opening ceremonial on the first day by the Countess Torby; but, while the first day was gloriously fine, a rough wind and a heavy storm on the second day made things unpleasant, but there is reason to think the financial result will be satisfactory.

Plants.

PLANTS.—In the group class, each covering a space of 300ft, valuable prizes were offered, but there could have been no doubt in the minds of the judges as to the appropriateness of awarding the first prize to Messrs. Cypher, Queen's Nursery, Cheltenham. Here stately Palms and fine-leaved foliage plants were in combination with stately Orchids, brilliant Crotons, &c.; every detail was perfect. Mr. W. Vause, Leamington, came second with an arrangement which fully justified this award; Mr. J. Read, The Gardens, Bretby Park, was third; and Messrs. Artindale and Son, Sheffield, fourth. The best group of Orchids came from Mr. J. Robson, nurseryman, Altrincham; the plants were set up in a tasteful manner, and included *Cattleya Mossiae* in variety, *C. gigas*, *Dendrobium formosum giganteum*, *Brassavola Digbyana*, *Odontoglossums*, *Cypripediums*, *Masdevallias*, &c. Messrs. Cypher were a good second, chief among their contribution was *Dendrobium Dalhousianum*, *D. moschata*, *Anguloa Ruckeri*, *Cypripediums*, *Odontoglossums*, *Lælia tenebrosa*, &c. Mr. W. Vause was third.

Carnations of the Malmaison type in groups made fine patches of colour. Mr. J. Robson was again first, having mostly plants of Princess of Wales finely bloomed; H. J. Jones, crimson, with here and there patches of scarlet, maroon, and yellow. Mr. P. Blair, The Gardens, Trentham, was second with larger plants, but less quality of bloom.

With six specimen plants in flower Messrs. Cypher were first, having a *Bougainvillea Sanderiana*, *Ixora salicifolia*, a well flowered *Francisea eximea*, a large *Statice*, and two others. Mr. W. Vause was second, having two *Bougainvilleas*, viz., *Sanderiana* and *glabra*, *Clerodendron Balfourianum*, &c. With six flowering and six foliage they had mighty Palms and brilliant Crotons, *Statice intermedia* and *profusa*; two good *Ericas*, *Clerodendron Balfourianum*, *Stephanotis floribunda*, &c. Second, Mr. W. Vause, Leamington.

In the class for eight Orchids, Messrs. Cypher were first with good examples of *Thunia Winniana*, *Cypripedium Curtisi*, *Lælia tenebrosa*, *Epidendrum vitellinum majus*, *Cattleya gigas*, *Lælia falfacata*, &c. Mr. G. Robson was placed second; chief among his were *Odontoglossum crispum*, *Cattleya Mendeli*, *C. gigas*, *Cypripediums*, &c. With six Palms Messrs. Cypher were again first, having *Kentias*, *Latania borbonica*, &c., Mr. Vause coming second, and the same positions were occupied in the class for six fine-foliage plants. Good medium sized *Caladiums* were shown by several exhibitors, and also pretty table plants.

ROSES.—The Rose tent proved one of the chief attractions at the show. In the class for seventy-two varieties Messrs. Harkness and Co., Hitchin, Herts, were first, and though the blooms were not full sized and lacking in colour in the case of the H.P.'s, they were much more refined than was anticipated. The chief varieties were *Caroline Testout*, *Boadicea*, *Niphetos*, *Souvenir d'Elise Vardon*, *Bessie Brown*, *Mildred Grant*, *Souv. de S. A. Prince*, *Le Havre* (one of the most brilliant of the H.P.'s), *Jean Ducher*, *Caroline Kuster*, *François Michelin*, *Clara Upton*, *Marchioness of Downshire*, *Mrs. J. Laing*, *The Bride*, *Helen Keller*, *Madame G. Luizet*, &c. Mr. Geo. Mount, Canterbury, came second, also with good flowers, but the short time at our disposal for note-taking prevented the gathering up of particulars. Messrs. G. and W. Burch, Peterborough, were third, and Messrs. Townsend and Son, Worcester, fourth. Some six stands were staged. There was the same number of forty-eight varieties, and here the King's Acre Nursery Company, Hereford, were placed first with good blooms for the season, chief among them *Marchioness of Downshire*, *Kaiserin Augusta Victoria*, *Caroline Testout*, *Exquisite*, *Charles Lefebvre*, *Robert Scott*, *Tom Wood*, *Madame Abel Chatenay*, *Lady M. Fitzwilliam*, *Bessie Brown*, &c. Messrs. Burch were second, Mr. G. Mount third,

and Messrs. Harkness and Co. fourth. With thirty-six varieties, three blooms of each, Messrs. Harkness and Co. were again first; they had some very good trebles, such as *Souv. de S. A. Prince*, *Helen Keller*, *Mrs. J. Laing*, *Fisher Holmes*, *Frau Karl Druschki*, *Souv. de President Carnot*, *Duchesse de Vallombrosa*, *Bessie Brown*, *Lady M. Fitzwilliam*, *Caroline Testout*, &c. Messrs. Burch were second, Mr. G. Mount third. The class for twelve new Roses brought no entry. In the class for twelve distinct varieties Messrs. Jarman and Co., nurserymen, Chard, were first with fine blooms of *Mildred Grant*, *Bessie Brown*, *Rosamond de Hugres*, *Frau Karl Druschki*, *Margaret Boudet*, *Marquise Litta*, &c. Second, Messrs. Townsend and Son; third, Mr. W. H. Frettingham, Beeston. The only stand of twelve Teas in trebles came from Messrs. Townsend and Son; they were good, and comprised *Madame Willermoz*, *Bridesmaid*, *Marie Van Houtte*, *Anna Olivier*, *Souv. de S. A. Prince*, &c. The best twelve blooms of one variety brought several stands, the first prize going to the King's Acre Nursery Company for *Lady Mary Fitzwilliam*; Messrs. Townsend and Son came second with *Bessie Brown*; and Mr. G. Mount was third with *Mrs. Sharman Crawford*. Garden Roses in eighteen and nine bunches brought creditable displays; Messrs. Townsend and Son were first, the King's Acre Company second, and Messrs. Harkness and Son third, but no names were attached to the varieties in the two first collections.

Cut Flowers and Decorations.

CUT FLOWERS.—Collections of hardy perennials, filling a space of 64ft, made a splendid display. Messrs. Harkness and Son, Bedale, were first with very fine bunches of highly developed subjects—*Lilies*, *Delphiniums*, *Iris*, *Pyrethrums*, &c., showing what a wealth of hardy flowers can beautify our borders in summer. Messrs. Gibson and Co., Bedale, were a good second, and Mr. J. H. White, nurseryman, Worcester, third. There was but one collection of hardy flowers from which nurserymen were excluded. The first prize was given to a representative collection from Mr. J. C. Waterhouse, Macclesfield, which included such things as *Poppies*, *Delphiniums*, *Campanulas*, *Canterbury Bells*, *Phloxes*, *Iris*, &c.

FLORAL DECORATIONS.—The best arrangement of flowers in a basket came from Messrs. Perkins and Sons, Coventry, who had a very rich combination of Orchids and foliage; Messrs. Jenkinson and Sons, Newcastle, were second; and Mr. D. Ffoulkes, Newcastle, third. The best bouquet for the hand—a charming



Gooseberry, Wonderful (much reduced).

This is a smooth, dark purple Gooseberry, of very good flavour and fair cropping qualities.

arrangement—came from Messrs. Jenkinson and Sons; Messrs. Perkins and Sons a close second; and Mr. D. Ffoulkes third. Again Messrs. Jenkinson and Sons were first with a ball and bridal bouquet, the former purple, pink, and yellow Orchids, the other white Orchids; Messrs. Perkins and Sons, who came second, had much the same colours, the workmanship very good in each case; Mr. W. Vause was third. The best stand of cut flowers also came from Messrs. Jenkinson and Son, while yellow and orange Orchids were charmingly arranged on one of the silvered branched stands with which we are now familiar. Mr. J. C. Waterhouse was second with a similar stand, blush and orange Orchids being prominent; Mr. Lashmore, Market Drayton, was third.

SWEET PEAS.—There was but one entry in each of the three classes for Sweet Peas. Special prizes were offered by Mr. H. Eckford, Wem, and Mr. R. Sydenham, Birmingham. The only exhibitor in each case was Mr. W. Shropshire, Market Drayton; the leading varieties: Hon. F. Bouverie, Prince of Wales, Coccinea, Hon. Mrs. Kenyon, Blanche Burpee, Miss Willmott, Captain of the Blues, Princess of Wales, Salopian, &c. In the committee's class for twelve varieties Mr. W. Marple, Penkridge, had some fine blooms of Othello, Countess of Radnor, Lottie Eckford, Sadie Burpee, Emily Eckford, &c.

Fruit and Vegetables.

FRUIT.—The leading class was for a dessert table decorated with flowers and foliage, and not less than fourteen dishes of fruit. The first prize fell to Mr. Jordan, gardener to T. Corbet, Esq., Droitwich, who had white and black Grapes, Peaches, Nectarines, Strawberries, Figs, &c. The Grapes, arranged on sloping baskets, with vases of Ixias and elegant foliage, this worked out at 114½ points. Mr. J. H. Goodacre, Elvaston Castle Gardens, was second; he had much the same arrangement of fruits, and employed Spanish Broom, Heuchera, and Gypsophila, 110 points; Mr. J. Read, Brethby Gardens, was third with eighty-nine points. The best dinner-table arranged with flowers and foliage was set up by Mr. W. Vause, Leamington, pink Sweet Peas and Carnations being employed with elegant foliage; a charming arrangement. Mr. A. H. Hall, gardener to J. C. Waterhouse, Esq., Macclesfield, was second; he employed pink Sweet Peas and blush Roses, with appropriate foliage. Mr. W. F. Vernon, Smethwick, was third.

Mr. Jordan came in first with twelve dishes of fruit; he had Black Hamburg and Muscat of Alexandria Grapes, a Queen Pine, Thomas Rivers and Royal George Peaches, Lord Napier and Pineapple Nectarines, two Melons, Strawberries, and Figs. Mr. McPherson, gardener to the Earl of Londesborough, was second; he had Muscat of Alexandria and Black Hamburg Grapes, Violette Hâtive and Stirling Castle Peaches, Lord Napier and Elruge Nectarines, a very fine Queen Pine, Melon, Strawberries, &c. Mr. J. H. Goodacre was third. With six dishes Mr. T. Bannerman, The Gardens, Blithfield, Rugeley, was first; he had Black Hamburg Grapes, Royal George Peaches, Early Rivers Nectarines, Brown Turkey Figs, Melon, and Strawberries. Second, Mr. J. Read, with Royal George Peaches, Pineapple Nectarine, Kirke's Plums, Figs, Strawberries, Melon. Third, Mr. Nicholls, gardener to Lady Beaumont, Carlton Towers, York. Mr. Nicholls had the best four bunches of Grapes, black and white, staging Black Hamburg and Buckland Sweetwater, both very good. Mr. J. Read was second with the same varieties; Mr. Goodacre was third with white Muscats as a white. Mr. A. H. Hall was first with two well-finished bunches of Black Hamburg; Mr. Goodacre was a good second, and Mr. Nicholls third. Mr. Bannerman came first with any other black, having Madresfield Court; Mr. Hall was second with the same. Mr. Bannerman also gained the first prize with two bunches of white Muscats, short thick bunches, fairly coloured; Mr. McPherson was second. Any other white was Foster's Seedling from Mr. Bannerman; Mr. Nicholls coming second with Buckland Sweetwater, Peaches, Nectarines, and other fruits were shown, but time did not admit of particulars being taken.

Vegetables were fairly well represented in competition for prizes by Messrs. Sutton and Sons, Webb and Sons, and others.

A number of classes were set apart for gentlemen's gardeners and amateurs, plants and cut flowers being shown, also for cottagers and children, but it was impossible in the limited time at our disposal to gather up particulars.

Miscellaneous collections were of great assistance in making a display, and gold medals were awarded to Mr. W. B. Child, Birmingham, for a large collection of hardy flowers; to Messrs. Dicksons, Limited, Chester, for the same; to Messrs. Blackmore and Langdon, Twerton Nursery, Bath, for a splendid display of double and single Begonias of the highest quality; and to Mr. John Forbes, Hawick, for Pentstemons and Phloxes in pots. Silver medals were awarded to Messrs. Harrison and Son, Leicester, for hardy flowers; to Messrs. Hewitt and Co., Solihull, for the same; to Mr. Henry Eckford, Wem, for Sweet Peas; to Messrs. Jarman and Co., Chard, for plants; to Messrs. Jenkinson and Son, Newcastle, for flowers; and to the Ranelagh Nursery Company, Leamington, for plants. Some bronze medals and certificates of merit were also awarded to collections.

Richmond Horticultural, July 1st.

The Horticultural Society of Richmond held its twenty-ninth annual show on July 1, and judging from the attendance it must have been a great success. The Public Recreation Ground, where the show was held, is an ideal place for a flower show. The Recreation Ground is eighty-seven acres in extent, and consists of large open stretches of grass, studded here and there with fine old specimen trees, isolated and in groups. The tents in which the show was held were three in number, and they were separated from each other by large open spaces.

Roses usually form one of the principal attractions of the show, but this year they were much less in evidence than usual, while many of the blooms were much below what is usually considered exhibition form. The chief honour in the Rose classes fell to Messrs. F. Cant and Co., of Colchester, who obtained the cup with a fine exhibit of good flowers, among which the varieties Mrs. Edward Mawley, Cleopatra, La France, Frau Karl Druschki, Mamie, Bessie Brown, Marquis Litta, Souv. de Président Carnot, Ulrich Brunner, Star of Waltham, and Mildred Grant were conspicuous. In other classes this firm also obtained prizes. Messrs. B. Cant and Co., of Colchester, and Messrs. Prior and Son, of the same town, also obtained several first and second prizes for exhibits of good blooms. A large group of mixed Roses, in which most of the new varieties were included, was shown by Messrs. Ware, of Feltham; it was very bright, and attracted much attention. The group was not for competition, but the society presented a silver medal.

Of amateur collections that shown by Earl de Grey (gardener, Mr. J. Smith) was by far the best. All the blooms were good, the following being very noteworthy: Mrs. W. J. Grant, Caroline Testout, La France, and Margaret Dickson. This group was not for competition. Among amateurs who competed for prizes, the following collections were noteworthy: Mr. W. Wilson, first prize; Mr. W. J. Palmer, first prize; and Mr. W. C. Romaine, first prize.

Herbaceous plants were not so much in evidence as usual. In the class for twenty-four distinct varieties there were two exhibits, both being very good. The first prize was awarded to the Right. Hon. Earl of Dysart, Ham House, Petersham (gardener, Mr. F. F. Conway), the second going to Mr. H. L. Warde, Petersham House (gardener, Mr. A. Allum). In both lots *Lilium umbellatum* and *L. croceum* were conspicuous.

Table decorations were very conspicuous, and some very fine effects were produced. First prizes were obtained by Sir C. Swinfen Eady, Oatlands Lodge, Weybridge; Miss N. H. Cole, The Vineyard, Feltham, and by Miss C. B. Cole of the same address. The arrangements of wild flowers were effective, the first prize being awarded to Miss Amy Freshwater, 50, Queen's Road, Twickenham. Special mention may be made of a very fine basket of flowers arranged by Miss C. B. Cole, the principal flowers used being scarlet *Gladiolus* and *Lilium longiflorum* with *Asparagus* and *Grasses*. It was awarded a first prize.

A superb group of Malmaison Carnations, not for competition, were exhibited by J. P. Morgan, Esq., Dover House, Roehampton (gardener, Mr. J. McLeod); this was one of the finest groups in the show. The Rev. A. W. Owen, the Old Palace, Richmond, showed several fine pots of *Lilium auratum*. A few Sweet Peas were exhibited, Mr. T. H. Bolton, Baron Hill Gardens, Beaumaris, taking first prize. For six plants of *Coleus*, Mr. J. Sallows, gardener to Mrs. Cooper Coles, Heddingham House, Twickenham, was first with fine well coloured plants; C. M. Bartlett, Esq., Upland, East Sheen (gardener, Mr. H. Hicks), being second, and Mr. H. Munn, gardener to Mrs. Griggs, Queensbury House, Richmond, third.

For six *Fuchsias*, Mr. Sallows was again placed first with fine, well grown and well flowered plants; Mr. Munn being second with smaller, well-grown plants. In the middle tent several fine groups of plants were to be seen. The centre was taken up for the greater part by a fine group of Palms from Mr. J. Bruckhaus, St. Mark's Nurseries, Twickenham. It was awarded a gold medal.

In the same tent Messrs. Fromow and Sons had a fine group of Japanese Maples and other foliage shrubs, together with a fine lot of *Kalmia latifolia* in full flower. This was awarded a silver medal.

A fine group of mixed flowering and foliage plants from Sir F. Wigan, Bart., Clare Lawn, East Sheen (gardener, Mr. C. Want), obtained a first prize; the second in the same class going to C. M. Bartlett, Esq. Another very nice group of plants, which obtained a first prize, was that from Mr. H. E. Fordham, The Nurseries, Twickenham. *Gloxinias*, *Liliums*, *Cannas*, *Crotons*, and *Ferns* were conspicuous. Messrs. Russell, of Richmond, were awarded a gold medal for a fine group of well-coloured *Crotons*, *Alocasias*, *Aralias*, and *Caladiums*, as was also Mr. W. Thompson, Sheen Nurseries, Richmond, for a group of flowering and foliage plants. Mr. Iceton, of Putney, showed a fine lot of *Lily of the Valley*, *Lilium longiflorum*, *Hydrangeas*, and other things. In the same tent was a group of six *Ferns* from Mr. C. Want, which obtained a first prize. All were large and well grown. They were as follows: *Davallia Mooreana*, *Adiantum farleyense*, *A. speciosum*, *A. tenerum roseum*, *A. Mariesi*, and *Asplenium Veitchii*. An interesting group of *Succulents* was shown by Mr.

R. Anker, Addison Nursery, Napier Road, Kensington. A group of Orchids, exhibited by Sir F. Wigan, Bart. (grower, Mr. W. H. Young), was awarded a gold medal, and a group of six fine plants from the same gentleman obtained a first prize.

Vegetables were well shown by Lord Aldenham, Aldenham House (gardener, Mr. E. Beckett), and he obtained several prizes. Fruit was shown in good condition by Sir C. Swinfen-Eady, Earl Dysart, and others. The allotment holders of Richmond and neighbourhood as usual made a very good exhibit of vegetables and cut flowers, all the lots staged being good. Outdoors, Mr. J. Russell, of Richmond, showed a fine group of tree Ivies, the varieties worthy of special mention being Gold Cloud, *flavescens*, *elegantissima*, *maculata aurea*, *rhomboidea ovata*, and *digitata aurea*. For the group a gold medal was awarded.

Portsmouth, July 1st.

On the Clarence Esplanade Pier, Southsea, the first Rose show of this society was held, and was in every way a success. Neither the classes nor the exhibitors were numerous, but the exhibits were quite of average quality. If Roses were not of huge size, they were bright and shapely.

The principal class was that for forty-eight distinct varieties, single trusses. For the first prize of £5 three competed, although a greater number entered. Messrs. D. Prior and Sons, Colchester, somewhat easily secured the leading prize with an even collection of medium-sized, brightly-coloured blooms. Especially noticeable were the following: Mdme. E. Boullet, La France, Gustave Piganeau, Caroline Kuster, A. K. Williams (rich), Madame Gabriel Luizet, Mrs. J. Laing (very fine), Maman Cochet, Duke of Edinburgh, Margaret Dickson, Marquis Litta, François Michelin, Ulster, Ulrich Brunner, Lady Mary Fitzwilliam, Bessie Brown, and Duchesse de Morny. Mr. G. Mount, Canterbury, was second with smaller and less even blooms; Killarney, Caroline Kuster, Général Jacqueminot, Mildred Grant, and Fisher Holmes were the most noteworthy. Messrs. Rogers and Son, Bassett Nurseries, Southampton, third.

For twenty-four trebles, distinct, Messrs. Prior were again the most successful, staging a capital set. A. K. Williams, Mrs. John Laing, Marquis Litta, Caroline Testout, Helen Keller, Kaiserin Augusta Victoria, Ulrich Brunner, Catherine Mermet, Souvenir d'un Ami, Antoine Pavoire, La France, and Rubens were extremely fine. Mr. Mount followed with smaller examples.

Tea varieties in single trusses were a strong class. Messrs. Prior once more asserted their superiority by winning first place with an even stand of high-class blooms—*Devoniensis*, Edith Gifford, Souv. d'Elise, Maman Cochet, Souv. de S. A. Prince, Medea, The Bride, and White Maman Cochet were conspicuous. Messrs. Mount and Rogers followed in the order here given. Messrs. Prior were again invincible in the classes for twelve Hybrid Perpetual dark, light, and twelve Tea or Noisette, with capital examples in all classes. Mr. Mount followed. In the last named class Mr. Prinsall, gardener to Mrs. Cecil, Ryde, was second with a creditable stand.

Garden Roses in eighteen distinct bunches were a distinct feature, so finely were they staged. Mr. G. Ellwood, gardener to W. H. Myers, Esq., M.P., Swanmore Park, Bishop's Waltham, easily won the premier award with a grand display of the following varieties: Mdme. Eugène Resal, Papa Gontier, Leuchstern, Mdme. Plantier, Gustave Regis, Common China, Gloire de Mousseuses, Cheshunt Scarlet, Fellenberg, Félicité Perpetué, Moschata alba, Gloire des Polyanthas, Wallflower, Queen Alexandra, Psyche, Euphrosyne, and Général de Butriol; second, Mr. Pruce, gardener to J. R. Winthorpe, Esq., Ryde. Bouquets were splendidly staged by Mr. E. Wills, florist, Southampton, both ball and bridal. Mr. R. W. Foot, 82, Palmerston Road, Southsea, second in both classes.

Hardy cut flowers were a distinct feature of the show, so numerous and good were they. For twelve bunches, distinct, Mr. G. Leek, Binstead, Isle of Wight, was the most successful, staging the following in good order: *Baptisia australis*, *Gladiolus Colvilli*, The Bride, *Gaillardia maxima*, *Stenactis speciosa*, yellow Lupin, and Delphiniums; Mr. Ellwood, second; Mr. E. Prince, third. Cut stove and greenhouse flowers and table plants were a good display. Mr. Ellwood won for both with desirable exhibits. In a smaller class for table plants Mr. Wills was first, followed by Mr. Papworth, gardener to the Portsmouth Parks Committee. Mr. F. Romer, as hon. secretary, had all the arrangements well in hand.

Canterbury Rose, July 2nd.

A few weeks ago the outlook for the twenty-fifth annual exhibition of Roses in the ancient cathedral city looked anything but bright, but fortunately the clerk of the weather has been kinder of late, with the result that if the show held in the Foresters' Hall on July 2 was not so good as some of its predecessors, it was much better than expectations. Most of the old exhibitors turned up in fairly good force, and Mr. Cooper Wachter secured the three-guinea cup for eighteen blooms with fairly good specimens; Colonel Pitt, another well-known exhibitor at Canterbury, came second, and Mr. R. West third. The Rev. H. B.

Biron grows his Roses on the top of a wind-swept cliff overlooking Dungeness Bay, but for all that he is one of the most successful growers in the Hop county, and secured first prize for twelve blooms, first for six, as well as an award for exhibiting a premier bloom. By his success the genial vicar of Lymington proved once more that Roses can not only be grown, but be grown well under trying circumstances when in the care of a true rosarian. Mr. J. Stanley won with eighteen varieties in the class open to growers of less than 1,000 plants, followed by Miss A. M. Hawksworth and Mr. H. Foster. Mr. H. Foster had the best twelve blooms in this division, Miss Hawksworth being second, and Mr. J. Stanley third.

In the three classes open to growers of less than 300 plants, the prizes were won by Mr. E. Murton, Canon Holland, Lord Teynham, and Mrs. Saunders. Miss Margerison had the best eighteen blooms in the division open to members growing less than 150 plants, Mr. S. Collard being second. For twelve blooms Mrs. Saunders was first, Miss Margerison second, and Mr. D. Amos third. In the classes open to members irrespective of number of plants grown, honours were fairly evenly divided between Mr. J. Stanley, R. E. West, Colonel Pitt, Cooper Wachter, and the Rev. H. B. Biron.

Reading and District Rose, July 2nd.

One would have thought that Reading could not have waited till 1903 ere having a Rose Society and Show of its own; but we here record the first annual exhibition, which, unfortunately, has fallen on a bad season, and yet a satisfactory turn-out appeared. The show was held in Forbury Gardens, a few minutes' walk from the principal streets in Reading, and which is admirably suited for the purpose. The best feature in the show were the Garden Roses in class 5, but some really charming Teas were staged in Divisions B and C.

CUT BLOOMS: DIVISION A.—A challenge cup and 20s. was accorded in class 1 for the forty-eight distinct blooms, which on this occasion went to Messrs. Alex. Dickson and Sons, Ltd., Newtonards, co. Down, whose flowers were all of good form, though, of course, undersized this year, and not so well coloured as in sunny seasons. They had choice blooms, however, of Mildred Grant, Bessie Brown (beautiful form), Edith D'Ombraire (one of the finest), Marquis Litta (firm and good colour), Gustave Piganeau (exceptionally bright), Marchioness of Dufferin (rather tight, with pointed petals), Marchioness of Downshire, a beautiful stout Rose; Ulster, small but creditable, and Helen Keller. The second prize fell to Mr. Geo. Prince, Longworth, Berks, with Gustave Piganeau, K. A. Victoria (a beauty), Perle des Jardins, The Bride, and Mrs. S. Crawford, but the flowers were ragged and weak. Mr. Turner, of Slough, fell third.

Mr. Prince, of Longworth, led for two dozen Teas and Noisettes, having a fair flower of Mrs. E. Mawley, but the others were very poor. He also staged blooms; and for twelve blooms of one variety, Mr. Thos. Rigg, of South View Nurseries, Caversham, was deservedly first with a very even set of Bessie Brown. Mr. Turner was second with Mrs. J. Laing; and Alex. Dickson and Sons, Limited, third with Mrs. Mawley. In the succeeding class for twelve distinct sorts, in trebles, Mr. C. Turner's set was bright and showy. His Ulrich Brunner made a good impression, and both G. Piganeau and Mrs. J. Laing were strong. Messrs. A. Dickson and Sons, Ltd., were rather far behind as seconds, and the set was very mediocre. Third came Mr. Prince, out of four entries.

Mr. Geo. Prince had a splendid selection of eighteen bunches of Garden Roses in class 5, beautifully arranged over black velvet. This was certainly the feature of the show, and comprised lovely bouquets of Mme. A. Carrière, Bellefleur, Bardou Job, Aglaia, The Garland, and W. A. Richardson. Mr. C. Turner, the only other exhibitor, was awarded second.

DIVISION B.—Mr. Thos. Rigg was far and away the finest exhibitor of two dozen distinct sorts, his Bessie Brown, Horace Vernet, Helen Brunner, and Tom Wood being up to a good standard. Mr. J. R. Tranter, of Henley, was second. Again Mr. Rigg led for the twelve Teas and Noisettes, with Mr. Tranter second, and Rigg's set of twelve Bessie Brown in class 8 were well set up and fair blooms.

DIVISION C.: AMATEUR CLASSES, OPEN.—Mr. Conway Jones, Hucclecote, Gloucester, beat Mrs. E. Croft Murray, Perivale, Ryde; third falling to Mr. W. C. Romaine, of Old Windsor. Mr. Conway Jones staged his blooms to good effect. Class 10 was vacant; and the next brought four entries (for twelve T.'s or N.'s), the premier award falling to Rev. F. Page Roberts, with decidedly superior blooms for the season. His Innocente Pirola was an A1 flower, and Comtesse de Nadaillac was finely coloured. Mrs. Croft Murray, of Ryde, again showed the way for twelve distinct blooms in class 12, having Bessie Brown; Mr. Romaine was second with Mrs. J. Laing; and third, Mr. D. H. Evans, of Pangbourne.

DIVISION D.: LOCAL CLASSES.—The challenge cup here for the eighteen went to Mr. Romaine with a creditable set, and Rev. F. Page Roberts furnished a very close second; five exhibiting in



Red Currant, Raby Castle (reduced one-quarter).

This is a very noted variety, a rapid grower, the fruits ripening later and hanging longer than those of any other variety. The bunches are long and the berries large.

this place. For the twelve T.'s or N.'s (e. 16), Rev. Page Roberts' set were highly creditable, the Comtesse de Nadaillac being one of the medal blooms of the show. The same exhibitor was foremost for six of any T. or N., having beautiful blooms of Niphetos. Another prominent exhibitor in the local classes was Mrs. Ashby, of Ashdene, Reading, who had really fine samples in classes 19 and 21. The majority of the other classes were, however, exceedingly poor.

DIVISION H.—Mr. R. C. Mount beat Mr. H. W. Dunlop, of Maisonette, Garley, in class 30, for twelve bunches of garden Roses, and each lot was creditable. Mr. Mount used more foliage, set out his bunches more widely, had plenty of sweet buds, and green moss beneath the glasses, so that his exhibit was very effective.

For the six bunches of Garden Roses in class 31, we found no name attached to the first, but Miss Ashby had a sweet lot as second, and these were set loosely in a square box, the varieties being all of the Rambler type, like Aglaia, The Garland, Crimson Rambler, Euphrosyne, and Lord Penzance Briar Rose Bradwardine—a beautiful exhibit. Mr. Hudson, of the Deanery, Sonning, was second out of five lots.

In the Strawberry classes, Mr. J. R. Tranter, of Henley, led for three dishes, and also one dish.

MISCELLANEOUS EXHIBITS.—Messrs. Cutbush and Son exhibited Marguerite "Coronation," Carnations, and Verbenas; while "rural decorations" came from a midland firm. Mr. E. W. Hudson, of the Deanery, Sonning (gardener, Mr. Sumner), arranged a small, but effective, display of decorative Roses in glasses, taller vases being at the back, and a wide-mouthed jar in front, giving the display both depth and height. Sprays of The Garland Rose were twined on the table beneath the glasses, the latter containing long stemmed Roses like Viscountess Folkestone, Eugène Resal, Caroline Testout, and Marie Van Houtte.

The secretary is Mr. W. Walker, of Dunollie, Bulmershe Road, Reading.

Norwich, July 2nd.

The National Rose Society would be doing a work of great assistance to Rose shows and exhibitors if it would invite all affiliated societies to send representatives to an annual meeting to mutually arrange the dates of shows, so as to avoid as much as possible the clashing of exhibitions in the same district with each

other or with National fixtures. The M.C.C. manages this extremely well in county cricket, and I do not see why the N.R.S. should not do it with Rose shows. Exhibitors have had some genuine cause for grumbling for some years; last year the Coronation was said to have upset everything, but I do not know that matters are very much better this year. With the National Show at the Temple on Wednesday, and Colchester and Norwich on the Thursday, East Anglian amateurs have been put to the inconvenience of finding it practically impossible to show at more than one of the three.

The Norwich Society, which is one of the oldest in the kingdom, and gives as good prizes as any, with the exception of the N.R.S., held its show on July 2 in the convenient grounds of Carron Abbey, where the N.R.S. held its northern meeting about seven years ago. The day was very hot, the tents were like ovens, and Rose showing consisted simply of trying to keep Roses in decent form till the judges had seen them. It is a farce in which there can be no pleasure, for it was impossible to hope that many of the Roses could be worth seeing by the spectators in the afternoon. One always longs for the Crystal Palace on such a day; no place like it for a Rose show in my opinion, but I am an old fogey now.

The only professionals present were the representatives of the three Colchester firms, and the Roses were much below par. For forty-eight blooms, B. Cant and Sons were first, having good specimens of Bessie Brown, Mrs. W. J. Grant, and Papa Lambert. F. Cant and Co. second, with Mildred Grant and Bessie Brown, good, and Prior and Son third.

In eighteen trebles exactly the same order was preserved, though the competition was close. The first prize winner had a good level stand, and the second had very fine trebles of Bessie Brown and Mildred Grant, but had also some very weak exhibits. In the class for eighteen Teas, Prior and Son were just first with a very badly set up stand; F. Cant and Co. following most closely with a particularly well-staged box; B. Cant and Co. third. There were no Teas of note in any of the boxes, and these three classes gave a good deal of trouble to the amateur judges, a very few points in each case separating the exhibitors. In twelve new Roses, F. Cant and Co. were first, and B. R. Cant second, and even here there were no blooms which seemed to call for special mention. There were no exhibits in the open class for Garden Roses.

In the amateur principal classes, Rev. A. Foster-Melliar was first for thirty-six, having as his best bloom Lady Moyra Beauclerc, which gained the medal as the best H.P. or H.T.; Rev. A. L. Fellowes second, and Miss Penrice third. In eight trebles, Reginald Steward, Esq., was first (a Mrs. E. Mawley, not particularly good, but perhaps the best choice, gaining the Tea medal); Mr. Foster-Melliar, second; and Miss Penrice, third. In twelve Teas, Mr. Foster Melliar was first, having a magnificent Cleopatra, which with another in his thirty-six were quite the best he ever cut, but they both collapsed under the heat; there were also a good Mad. Hoste in this box, and a very fine, though not large, example of Georges Schwartz of magnificent colour; Mr. Fellowes was second, and Mr. Steward third.

In twelve H.P.'s and H.T.'s of one variety, Miss Penrice was first with La France, Mr. Foster-Melliar second with Mrs. J. Laing, and Mr. Fellowes third with La France. In twelve Teas of one variety Mr. Fellowes was first with Maman Cochet, clean, though small, and Colonel Rous second with Niphetos, poor. There is always, for some reason, very little competition for the eup offered for twenty-four to Norfolk exhibitors, but fair stands considering the weather were shown. Miss Penrice was first, showing Marie Cointet (a Rose I have not seen for years), and Catherine Mermet well; and Mr. Fellowes second, with fair specimens of A. K. Williams and Marehioness of Downshire. A few Garden Roses were shown, but they were badly staged in exhibition boxes, instead of in vases as they should be. Single Roses and Sweet Briars should be shown, if possible, as Mr. Frank Cant displayed them at Holland House, some 2ft. or 3ft. of the old wood being staged upright, with the flowering sprays naturally growing from them.—W. R. RAILLEM.

Windsor and Eton, July 4th.

The twelfth annual exhibition of the Windsor and Eton District Rose Society was held on Saturday on the beautiful slopes of Windsor Castle. The Queen's cup, given by Queen Victoria, for forty-eight distinct Roses (open to all England), was awarded to Messrs. Harkness and Co., of Hitchin, Herts. The cup must be won three times to be taken possession of outright. Messrs. B. R. Cant and Co., of Colchester, and Messrs. Dickson, Newtownards, Ireland, had each won it two years. In the local amateur classes the Windsor eup, for eighteen, distinct, went to Mr. Colin Romaine, The Friary, Old Windsor, for the third time running and becomes his property. Mary, Duchess of Sutherland's cup, for the best display of cut blooms, went to Mrs. Irving, Old Windsor, also for the third time, and becomes her property. The National Rose Society's silver medal in the professional classes for the best bloom went to Messrs. Harkness for a Mrs. John Laing, and the medal for the best bloom in the amateur classes to Mr. R. Foley Hobbs, Worcester, for a Bessie Brown.

Sutton Rose, July 4th.

From our report which follows, it will be gathered that, on the whole, a very good exhibition was got together on Saturday last by the Sutton (Surrey) Amateur Rose Society in the grounds of Manor Park School. A number of medals, cups, and pieces of plate were awarded in the local classes. Curiously, no Garden Roses were entered, though one class was set apart for them, and their absence at a Rose show in these days makes the exhibition incomplete. These are the days of decorative Roses. The committee and Mr. Nightingale deserve congratulations on the success of their efforts, and the day proved ideal for an event of this kind. The sale of flowers in aid of the funds of the Cottage Hospital, and a pastoral play, are two features of the occasion to which allusion should be made.

DIVISION A: OPEN TO ALL AMATEURS.—The first class on the schedule (the coronation cup class) required a dozen flowers in distinct sorts, and Mr. A. Tate's set from his extensive collection at Downside, Leatherhead, was first, though Mr. E. B. Lindsell made a really good bid for the leading honours, which he must have missed by only a few points. Both collections were as fine as any likely to be seen this year, the blooms being large, smooth, and well shaped, and of good colours according to the varieties. Mr. Tate's Ulrich Brunner at top left-hand corner was a massive flower; his Bessie Brown was fair, but the second prize winner had a better; and his other four reds were Suzanne Marie Rodocanachi (perfect), François Michelon, Dr. Sewell, rich and strong; and Gustave Piganeau, of a light colour. His other blooms were fair. Mr. Lindsell's Ulster was a firm, fine flower; Frau Karl Druschki, of immense size, purity, and with reflexing petals making a keen point. This is going to be a grand exhibition flower. The third place out of five entries fell to Mr. E. M. Eversfield with small flowers.

The two dozen blooms came in the second class, and Mr. Lindsell staged the best set, though these were below the average in quality of the foregoing twelve. His Bessie Brown was large, but marked on the wing petals; Frau K. Druschki was good in petal, but loosely built; White Maman Cochet was sweet; Dr. Sewell was intensely rich, and with very thick petals, a fine bloom; and lastly, Ulster was a fair, good flower, with undersized. Mr. A. Slaughter was second with a very poor lot, and the third prize went to Colonel T. H. Pitt. For eighteen varieties Mr. Tate beat Mr. E. M. Eversfield, and Mr. G. H. Baxter followed third. Mr. Tate had respectable flowers of Mildred Grant, Bessie Brown, Horace Vernet, A. K. Williams, and K. A. Victoria, and the second prize winner had a beautifully coloured flower of Madame G. Luizet and a small but good Horace Vernet. Messrs. Tate and Lindsell were placed in this order for the eight distinct trebles, the two sets making a favourable show, and magnificent samples were seen of Bessie Brown, with that lovely flesh tint over the inner petals; and K. A. Victoria was also grandly staged. Nor could one find much fault with Mr. Lindsell's Mrs. J. Laing and A. K. Williams, or Mr. Tate's Caroline Testout, Horace Vernet, and Gustave Piganeau. The third place out of four was awarded to Mr. Eversfield with good A. K. Williams, K. A. Victoria, and Mrs. Laing.

Five competitors staged each a dozen Teas and Noisettes in class 5, Rev. F. R. Burnside leading the way against Mr. Tate (second), Mr. Eversfield (third). The flowers were small and poor, except for pretty Maréchal Niel, Mrs. Mawley, and Maman Cochet in Rev. Burnside's set; and a large bold flower of Mrs. Mawley (quite a salmon-tea-pink shade), in Mr. Tate's.

DIVISION B: GROWERS OF LESS THAN 1,000 PLANTS.—In the sixth class nine distinct blooms were required, and Mr. J. T. Thompson arranged a highly creditable selection, having Ulrich Brunner, Mrs. J. Laing, F. Michelon, and Dupuy Jamain in fine form; the second place falling to Mr. G. H. Baxter with handsome flowers of Lady M. Beauclerc, Mrs. S. Crawford, and Marquis Litta, the latter inclining to coarseness. Mr. E. Wilkins was third. For the four distinct, in trebles, Mr. Thompson again proved his superiority, and staged excellent Mrs. Laings, Brunners, Michelons, and Duke of Wellington; Mr. Baxter being a good second with highly pleasing blooms of White Maman Cochet, Mrs. S. Crawford, Caroline Testout, and Bessie Brown; and Mr. Wilkins again came third. This was one of the best classes for quality of blooms in the exhibition. For nine Teas in class 8 Mr. Baxter led, with Mr. Wilkins next.

In Division C, for a collection of Garden Roses, there were no entries.

DIVISION D: NURSERYMEN'S OPEN CLASS.—A brilliant array of good flowers comprising five separate entries was furnished under class 10 for thirty-six varieties, the first prize of £3 falling to D. Prior and Son with generally heavy and smooth flowers. Their Helen Keller was a perfect bloom, and others of distinction were seen in Horace Vernet, Duke of Edinburgh, Gén. Jacqueminot (large), Ulster (grand tone), Bessie Brown, Daisy (a lilac-purple), Frau K. Druschki, Xavier Olibo, and Caroline Kuster. R. Harkness and Co., of Hitchin, succeeded as seconds, in which place they were hard upon Priest and Son, and had a sweet Jean Ducher, and representative samples of Marchioness of Downshire, which is a lovely flower; Dr. Sewell, Madame G. Luizet, Alf Colomb, Madame C. Ramey, Mrs. Laing, and La France of

'89. The third award fell to B. R. Cant and Sons with very small flowers, except a fine Bessie Brown and Frau Karl Druschki.

The latter won premier place for the twenty-four distinct, having capital Roses; there were Crown Prince at its best, Beauty Lyonnaise being on one side of it and forming an extreme contrast. Frau K. Druschki, Gén. Jacqueminot, Comte Raimbaud, Tennyson (small, but strong and good otherwise), and Mildred Grant, better here than elsewhere. Second out of five came Prior and Son, and third R. Harkness and Co.

F. Cant and Co. led for the twelve Teas and Noisettes with clean, if small, flowers of Golden Gate, Medea, Souv. de S. A. Prince, Rubens, Cleopatra, Mrs. Mawley, Muriel Grahame, The Bride, and Ethel Brownlow; and Messrs. Prior were again second out of five entrants, and staged a perfect gem in Maman Cochet, having a beautiful high-pointed centre, lovely wings, and charming colour tones. Paul and Son, of Cheshunt, followed third.

DIVISION E: LOCAL CLASSES.—The competition in this section was moderate, but some good and well set-up flowers were on view. The leading awards were captured by E. J. Holland for twelve blooms in nine varieties; and second, A. E. Farnden. Mrs. West had the best nine distinct, and was second to E. J. Holland for six Teas. K. H. Gifford had the best half-dozen of one variety with Mrs. Laing; and E. E. Grimson came next with the same variety. K. Gifford again won for the six distinct kinds in class 17.

In the few remaining miscellaneous classes, comprising Sweet Peas, Gloxinias, Begonias, and table plants, the forenamed winners were still appearing. Mrs. West's Sweet Peas and those of G. K. Wright were really good; and so were E. J. Holland's three handsome Adiantums. Mr. W. Palmer had a trio of greenhouse plants, comprising a well-flowered Show Pelargonium and two Begonias; and E. Holland followed. For a basket of Roses (W. A. Richardson) Mrs. E. Grimson alone staged. The same lady led for the hand bouquet, and Mrs. E. J. Holland had the best spray and two buttonholes. In class 25, for a basket of Roses, Miss Gladys Holland beat Miss Sylvia Farden, and third came Miss Alabaster, each with pretty exhibits. Four decorated dinner tables were arranged, and here Mrs. Brown was placed foremost with Iceland Poppies and Selaginella thinly wound round the base of the glasses on the cloth; second, Miss E. Hewetson with W. A. Richardson Rose bud, Adiantum, Asparagus Sprengeri, and Golden Honeysuckle set in "Rural Decoration" stands; third, Mrs. Holland, with Mrs. W. J. Grant Rose, Grasses, and Selaginella, but this was too heavy. Miss M. West was highly commended.

From Messrs. Peed and Sons, of Roupell Park Nurseries, West Norwood, there came an exhibit of Sweet Peas in pots. "Rural Decorations" were staged by a local firm, and Palms came from Morse Bros., Epsom.

Harrow Horticultural, July 7th.

This is the fiftieth year of the society's existence, but nothing special was done on that account. The exhibition was held in the grounds of Mr. J. J. MacAndrew, at Dudley Lodge, and was really excellent; good in Roses, strong in ladies' decorative classes, not lacking in fruit, having a large and creditable selection of herbaceous cut flowers and annuals, and lastly, a representative department for vegetables.

Mr. E. Mawley, who spoke at the luncheon in the Queen's Head Hotel, complimented the treasurer (Mr. L. Pawle), the joint secretaries (Dr. Williams and Mr. Spencer), and committee on their well-appointed plans, and as an old visitor he also noted how great had been the improvement in the staging of the flowers. Referring to the Temple Rose Show, he observed that the N.R.S. had to rely largely on their green baize, in lieu of flowers, and wished they could hold their show a week later.

N.R.S. medals were given for the best blooms. Messrs. Prior won with Bessie Brown in the open classes, and Mr. F. Spencer secured both the amateurs' medal and the members' for the same flower, a large, though loose sample of Mildred Grant.

CLASS 1: OPEN TO ALL GROWERS IN ENGLAND.—The Harrow ladies present a Challenge Cup here, as premier award for thirty-six distinct Roses, the winners last year being B. R. Cant and Sons. On this occasion, however, the honours fell to D. Prior and Son, of Colchester, whose stand contained the N.R.S. medal bloom, an exquisite Bessie Brown. With this one must draw special attention to Robert Scott, which Mr. Prior speaks of as both a good grower and a staying flower. The colour is soft rosy-blush, and the rounded form is very pleasing. Mrs. Mawley was yet another splendid flower, and his Comte Raimbaud, Mildred Grant, Prince Arthur, and White Maman Cochet were each good. F. Cant and Co. came second with a decidedly poor set, their best being Frau K. Druschki and Tennyson. B. R. Cant and Sons were next with a good Mildred Grant (large and deeply tinted) and Comte de Raimbaud. There were four entries.

Prior again led for the dozen Teas and N.'s, having moderate flowers of Maman Cochet, Madame de Watteville, Mrs. E.

Mawley, and Jean Ducher, of a coppery hue. Second came F. Cant with Lady Roberts, Souv. d'Elise, The Bride, and Mrs. Mawley. Third out of six came Mr. Orpen with fresh flowers of Bridesmaid, White Maman Cochet, Medea. Hon. E. Gifford, Madame Hoste, and Maman Cochet, the latter of a rich purplish tint.

Messrs. Paul and Son, of Cheshunt, were quite alone in class 3 for twelve bunches of garden Roses. They staged Perle d'Or, Marquis de Salisbury, Madame Jules Grolez, L'Innocence, Madame Ravary, Madame A. Chatenay, W. A. Richardson, Gustave Regis, Reine O. de Wurtemberg, Camoens, Crimson Rambler, and Liberty. These were all firm in the bud state.

CLASS 4: OPEN TO ALL AMATEUR GROWERS.—Four competitors were forward for twenty-four Roses, and Mr. E. B. Lindsell, of Bearton, Hitchin, was placed first with a massive stand, his flowers being heavy, well formed, pure, and of good colour. Mrs. S. Crawford, Bessie Brown, Mrs. W. J. Grant, Mrs. J. Laing, and S. M. Rodocanachi were the finest, though the new Alice Lindsell (after the colour of Mildred Grant), also La France and Louis Van Houtte, were each very fine. This set carried Lewis Pawle's Cup. Mr. Orpen was second, and Mr. E. Mawley third.

For twelve Roses, not open to exhibitors in class 4, Mr. A. Munt, of Hedgerley, Slough, beat Mr. W. G. Adcock, The Briars, North Finchley, and third came Mr. G. A. Hammond, from Burgess Hill, Sussex. Competition here was keen, there being seven entries, and some smart blooms were staged. Frau K. Druschki, Bessie Brown, Marchioness of Londonderry, and Horace Vernet were the pick of the whole seven sets.

In the same section, class 6, for twelve T.'s or N.'s, the Rev. F. R. Burnside, Stambidge Rectory, Essex, was placed prior to Mr. O. G. Orpen, and third, Mr. A. Munt. Mr. Burnside's flowers were all cut young, yet they made a goodly show. The form and smoothness were good. He had good flowers of White Maman Cochet, Mrs. E. Mawley, Anna Olivier, Caroline Kuster, Innocente Pirola, Golden Gate, Medea, Muriel Graham, and Madame Cusin.

For the twelve Teas and N.'s in class 7 Mr. Lewis Pawle was placed first with smooth, fresh blooms, his best being Madame C. Ramey, K. A. Victoria, Caroline Testout, S. M. Rodocanachi, and White Maman Cochet. The second place was accorded Dr. Williams with François Michelin, S. M. Rodocanachi, Marguerite Appert (an uncommon H.T., after Marquis Litta type); also La France, Bessie Brown, and a sweet flower of Mrs. S. Crawford. Mr. Williams' blooms had suffered from the winds, but did him credit. Third came Mr. J. R. Cater.

OPEN TO GARDENER MEMBERS OF THE SOCIETY ONLY.—For a dozen distinct Lewis Pawle led, having an even stand of beautiful flowers of the leading up-to-date sorts. Mr. Spencer, one of the secretaries, had the best six; a grand set they were, one being the medal bloom in this section, an exquisite and very large Mildred Grant. He also had Tennyson, Lady Clanmorris, Clara Watson, White Maman Cochet, and Bessie Brown, each choice. Mr. A. Mitchell followed next with a good C. Testout and Abel Carrière. In Mr. F. Spencer's leading six T.'s and N.'s (class 9) the selection was again a fine one, there being Jean Ducher of grand colouring, and a lovely Mrs. Mawley flower. Dr. A. H. Williams was decidedly behind, as second, and Mr. Cater third. Again Mr. Spencer led for the quartette of one kind, having White Maman Cochet, fine firm samples. Mr. Mitchell and Mr. Pawle were second and third respectively. For the three vases of cut blooms Mr. Spencer beat Mr. Hargreaves, and third came Dr. Williams, each showing tastefully. Mr. Hargreaves had the best four bunches of garden Roses, and Dr. Williams furnished an A1 second.

CLASS 13: OPEN TO AMATEUR MEMBERS ONLY.—The lead was taken for six kinds by Mr. A. Bryans, who included a splendid Heinrich Schultheis; and second, Mr. Burton. In the succeeding class for a vase of blooms the lead was with Mr. A. J. Obermayer, and Captain Johnson was next.

Class 15 opened the cottagers' section, which was a small one, and the best exhibitors were Mrs. Whitfield, Mr. Mower, Mr. J. Allen, and Miss Tooth.

Amongst miscellaneous flowering plant exhibits there were some floriferous Begonias, and Mr. Hargreaves did best. He also led for six plants in bloom, and Mr. Charles had the premier award for a specimen flowering plant, equal with Mr. J. A. Stuart.

The cut flower classes were exceptionally good, the bunches being well set up, fresh, and comprising a nice selection. In class 25, for a collection, Mr. S. Gardner was in the forefront, followed by Mr. Hargreaves and Mrs. Charles in this order. For the twelve bunches of cut flowers, Rev. C. E. Owen was placed in the forefront; Mr. E. Graham following, and Mr. L. Pawle third. This was a really good feature of the exhibition.

Sweet Peas formed another section of merit, though had they been set wider apart, and on tiered tables, they would have been much more effective. In class 28, for twelve bunches, Mr. Pawle was first; Mr. Stuart, second; and Mrs. Charles third, there being five entries. Messrs. A. K. Carlyon, Hopkins, and Howson were placed in this order for six bunches of Sweet Peas. A set of twelve Pansies from Rev. Mr. Owen brought him first honours, and they were very creditable.

Fruit and vegetables formed distinctive sections, and the exhibitors already named secured the prize. Strawberries were exceptionally large and firm; but the keen competition and the greatest interest was centred on the vegetables, which occupied nearly two of the long tables. Mr. Gardner led in class 41 for six kinds; and Mr. S. Lithgow was second; the third going to Mrs. Charles. Mr. Stuart led for four kinds.

For a group of plants, Mrs. Charles led before Mr. S. Gardner; but the latter had the best specimen foliage plant—a shapely *Adiantum*.

No less than ten decorated tables were arranged in competition (class 124), and extraordinary interest was evinced in the judging of them, and the show they furnished. Eventually the foremost place was awarded to Miss Evelyn Macandrew with a lovely arrangement in soft blush pink. This included Cornflowers, Gladiolus, and Gypsophila in bowls, Asparagus being wound round the edge, and pink muslin beneath the bowls. Miss O'Neill came second with blue Sweet Peas; glasses being in each corner and one in centre, with a trail of Smilax extended to each. The third prize went to Mrs. A. Mitchell with a fearful design in blue Cornflowers, Eryngiums, and Smilax. It was much too heavy. The judges wisely gave their reasons for withholding prizes in certain cases by a written explanation on the back of the cards. This consoles and teaches.

Miss Beatrice Langton beat Mrs. G. A. Holme for the centre table decoration, having a new glass form of flower holder, shaped like the frame of a boat with glasses on either side, which were filled with Rose buds. Miss Macandrew furnished a very tasty basket of cut flowers (class 125), and beat Mrs. Middleton and Miss D. Prior.

Amongst non-competitive exhibits were Sweet Peas from Mr. Eckford, of Wem (a fine collection, and much admired); Caladiums from Mr. J. Lion, of Stanmore; and Carnations, Sweet Peas, Roses, &c., from Messrs. Cutbush.

Metropolitan Public Gardens Association.

OPEN SPACES.—At the monthly meeting of the Metropolitan Public Gardens Association, held at 83, Lancaster Gate, W., on Wednesday afternoon, the Earl of Meath, chairman, presiding, it was agreed to offer to lay out the disused burial grounds of St. George the Martyr, Holborn, and St. Botolph's, Billingsgate, and the Bridewell Burying Ground, Dorset Street, E.C., subject to their maintenance being secured. Progress was reported with regard to schemes for acquiring Poplar Churchyard and St. Peter's Square, Hammersmith, but it was stated that the latter fine enclosure was in danger of being built on, unless the offer made to the association on the part of the owners was accepted by the Borough Council. It was agreed to make representations to the London County Council, which body had recently purchased similar squares at a far higher figure. A contribution was voted towards the fund being raised for the addition of eighty acres to Hampstead Heath at a cost of £48,000, and it was reported that a strong committee had been formed, with the Earl of Meath as vice-president, and Mr. Shaw Lefevre as chairman. A letter was read from the Duke of Devonshire stating that he was negotiating for the sale of his freehold interest in the well-established garden of the Royal Horticultural Society at Chiswick, lease of which was being surrendered by the society, and he could not therefore facilitate its transfer to the local authority, as proposed by the association. A letter was read from the Duke of Westminster, in which he expressed his wish to present the handsome shelter seat in the Duke Street garden to the association for re-erection elsewhere, and it was decided to thank the Duke for his kind gift, and to remove the structure to the new ground at Merton Road, Wandsworth, which is to be opened on Saturday. A lady member of the association also wrote offering to provide the association with funds for the erection of a much-needed drinking fountain in Nelson Square, Blackfriars, which enclosure had recently been secured for public recreation by the London County and Southwark Borough Councils. It was decided to offer to plant trees in Bedford Row, Lamb's Conduit Street, and Queen's Road Circus, Battersea, and it was stated that twenty-four out of the twenty-eight metropolitan borough councils had given their assent to the association's proposal to secure an extension of Section 43 of the Public Health Act Amendment Act to London, so as to enable London authorities to plant trees in thoroughfares. Seats were granted for Hanwell Recreation Ground and Downshill Ground, Tottenham.

Gooseberries versus Business.

Several of the popular varieties of Gooseberries now ripening in the vicinity of London are souvenirs of the big Gooseberry show boom among the Lancashire operatives between sixty and seventy years ago. The exhibitors were skilled in crossing suitable sorts, so as to procure fruit that would scale the heaviest. These shows were conducive to great irregularities on the part of the mill workers, and pressure was put on the Gooseberry growers to have them stopped. Still, we are indebted to the craze for some of the finest varieties of the fruit now in cultivation.

THE BEE-KEEPER.

Removing Surplus.

The removal of the honey is one of the anticipated pleasures of bee-keeping, and generally impresses the novice more than anything else during the whole of the season's manipulations. The operation usually takes place in most parts of this country in July, as the honey harvest is on the wane at the end of that month, after which the bees are only able to obtain sufficient for a hand-to-mouth existence. The main points in removing comb honey are to preserve the inviting whiteness and completeness of the cappings, and to avoid anything approaching stickiness in its appearance, therefore great care is necessary to prevent damage to the cappings by improper handling. A little smoke should be gently driven in at the top of the super as the quilt is taken off, and if the honey is fully sealed over, the smoke will cause the majority of the bees to retreat to the lower portion of the hive, when the removal of the sections may be effected without any trouble, and empty sections substituted for the full ones when necessary. If, however, there are many combs unsealed, the smoke will frighten the bees, causing them to stuff themselves with honey, and there is more difficulty in expelling them. Under these circumstances it is best to shake the section to dislodge as many bees as possible, and blow the stragglers off. The operation should be rapidly carried out, because as soon as frightened, the bees will commence making innumerable pin holes in the cappings through which they stuff themselves.

This is a forcible argument against the use of super clearers for removing sections, as in lifting the super the bees are frightened, and they will not hesitate to break the cappings of the cells. The work of clearing supers for extracting purposes has been considerably facilitated by the invention of an ingenious contrivance called the super clearer. With this admirable appliance, if the operation is carefully performed, the bees scarcely know that they have been interfered with. It is advisable, however, to clear by this plan in the evening. The supers of honey must be lifted completely from the hive and set upon the board fitted with the super clearer, then both are placed on the hive again with the escape in the proper position, and by the early morning the bees will have left the upper portion for the brood nest, and the box may be lifted off perfectly free from bees and carried inside. Should a few remain, as is sometimes the case in cold weather, they should be brushed off with a feather. The simple cone in the hive roof answers the same purpose as the super clearers, but the method of clearing is somewhat different, and there is more excitement. In order to clear by cones, first remove the quilt from the top, lift the supers off, cover the brood nest with the quilt, setting the whole of the tier upon it with the top combs exposed, and replace the lifts and roof. The bees finding themselves queenless are soon in an uproar, and as the only points of light are the cones, they are not long before they are hurrying through them pell-mell.

So soon as the supers are cleared they must be removed, as if left too long, the bees return, and in attempting to gain admission get excited, and fighting often ensues. Every effort should be made to prevent robbing, and in all these operations care must be taken to leave no broken pieces of comb about, as after the removal of the honeycomb these are frequently causes of robbing, and should be guarded against by narrowing the entrances of hives, and performing any lengthy operations in the evening, so that if the aroma of the honey should disturb the apiary, and robbing commence, the approach of night will prevent any great loss by fighting.

It is seldom the case that colonies capable of defending themselves fight with one another. It is only those stocks which are weak in numbers, or nuclei which are attacked, and another frequent cause of robbing and fighting is carelessness in feeding. When honey is plentiful there is little or no danger of robbing; but in time of scarcity, if syrup is spilled about hives, or strange bees are allowed access to feeders, it will cause quite a commotion. Weak colonies should, therefore, have extra care and attention bestowed upon them, the entrances being narrowed until only one bee at a time may enter, and if any honey or syrup is spilled it should be covered up immediately with soil, or sprinkled with carbolic acid. If robbing is already in progress, it may sometimes be stopped by placing a cloth damped with carbolic acid on the hive front, or smearing the entrance with a few drops on a feather. This will frighten the aggressors, preventing them from alighting, and will enable the attacked to defend themselves better.—E. E., Sandbach.

Swarming.

In consequence of the late season and the continued heat, swarms will be very common. Many are at a loss to know what is necessary when the swarm issues. One of the best assistants is a good garden syringe, and of course the skep and a cloth, to say nothing of a pail of water. Generally, not always, the bees cluster under the alighting board for a day or so before swarming.

When this is observed a good watch should be kept between the hours of 10 a.m. and 4 p.m., and if the weather be very warm, as early as 9 in the morning. When the air seems alive with bees after the issue of the swarm, bring the syringe into play, and you will soon be rewarded by the bees clustering near. It is rare that first swarms rise and go off before first settling, but casts or after swarms often play this trick, and it is almost useless to try to prevent them. The best course to prevent this is to cut out all queen cells except one after the hive first swarmed, taking care to leave one good cell.

How to Hive.

When the swarm has clustered well, and looks like a bunch of grapes, give them a slight syringing, and this will cause the bees to tighten their hold and to huddle a little closer together. If the branch on which they have settled be of no practical use, and can be easily cut off, then sever it, placing it on the outstretched cloth, and the skep over it. Raise one side of the hive with a large stone, so that bees can easily get in, and also for the purpose of ventilation, because they are in a very heated state. If the branch is valuable or too thick, then hold the skep mouth upward, and give the branch two or three sharp shakes, and the bees will generally fall into the hive; then overturn the skep on the cloth as above; syringe the spot where the bees first settled to dislodge the stragglers who remain. These cases are very simple to deal with. Sometimes they settle on the trunk or large limb of a tree; if the skep can be placed over the swarm, proceed to drive the bees up by means of the smoker, or take a brush and place the skep underneath and brush them into it, and then use the syringe. Proceed in the same manner if the bees prefer a wall.

People often marvel when an expert bee-keeper is seen handling bees fearlessly and without stings at swarming time. The truth is that the bees have gorged themselves with honey, in order that they may build a new home, for wax is prepared from honey in the body of the workers, and they cannot, if they would, turn the abdomen to the correct angle for stinging. Leave the bees in a shady place until evening, i.e., after 6.30 at this time of the year, and then remove to permanent quarters. Many may think that this will make no difference, but I remember, when a novice, the trouble it caused me, for I placed them in their permanent quarters six times and then failed. They settled quietly enough in the straw skep and remained in the frame hive when tossed in the evening.—HYBLA.

A Fungus Disease of Young Fruit Trees.

(EUTYPELLA PRUNASTRI (SACC.))

Every now and again this minute but very destructive parasite appears under the form of a disease wave, causing a very considerable amount of damage, hundreds, or in some instances thousands, of young trees being injured or completely killed during one of these sporadic attacks. Young standard fruit trees, up to the age of eight years, are most liable to the disease, and as the stem or stock is the part attacked, the girdling of this portion of the plant by the fungus growing in the bark and cambium means the death of the entire tree, which in a dull and damp season favourable to the rapid growth of the parasite, usually occurs during the spring following the first year of attack.

In the case of nursery stock, Plum (especially the variety called Victoria) and Apple trees have suffered most severely in this country; Peach, Apricot, and Cherry to a less extent. The fungus is also often very abundant on wild Plum, Bullace, Blackthorn, &c., and it is the spores produced on such wild trees that infect cultivated stock. The first indication of the presence of the disease is the premature yellowing and fall of the leaves, followed by a drying up, browning, and shrivelling of the bark of the stem. During the spring following the first year's inoculation, numerous minute, elongated cracks, arranged in dense clusters, appear in the dried-up bark. These represent the first form of fruit produced by the fungus (Fig. 1), and are followed during the second season after infection by larger, fewer, and more irregularly scattered cracks, always transversely arranged in the now dead bark, containing a second and more highly developed kind (ascigerous) of fungus fruit (Fig. 3). The spores of the fungus are mature during late spring and early summer, and it is at this season that infection of young fruit trees takes place, the spores gaining access to the stem either through the unprotected ends of pruned twigs or through the living bark itself. All wounds on the stem exposed by cutting off shoots, however small, should be protected at once by a coating of gas tar, until the tree is at least ten years old. If this precaution is neglected, spores frequently alight on the newly-formed wounds, where they quickly germinate and spread upward and downward in the living bark, which becomes discoloured; finally the fungus bursts through the bark it has killed, and produces spores on the surface (Fig. 6).

In order to prevent spores from germinating on the surface of

the stem, and then entering through the bark directly, the entire stem of the tree should be painted with the following composition:—Reduce softsoap to the consistency of thick paint by the addition of a strong solution of washing soda in water. Add 1lb of powdered quicklime to every 5 gals of the dissolved soap, and stir the whole until thoroughly mixed. Apply to the trunk with a paint brush, being careful to cover every part. This mixture is tenacious, not easily dissolved by rain, and usually lasts for one season if properly made and applied.

Up to the present the disease has only been observed on a large scale where the trees are growing in stiff clay. Under such conditions it is very important to avoid deep planting, otherwise the roots are liable to be killed owing to the presence of stagnant water, lack of air, &c., during a continuous rainy period, especially in spring or early summer. If the trees are not actually killed by this means alone, which is very frequently the case, their vitality is considerably weakened, and they are thus rendered more susceptible to the attacks of parasitic fungi. In a case of an extensive attack which the Board of Agriculture investigated in the county of Nottingham in 1902, the trees had evidently been seriously crippled by being planted too deep in a strong soil, and were consequently specially susceptible to attack. It is important that the fungus should be recognised by gardeners, as its frequent occurrence on wild trees in hedgerows might lead to the infection of nursery stock in a wholesale manner, as has in fact taken place, more than once, unless detected and removed without delay. All diseased plants should be burned at once, as, if allowed to lie about, the spores mature on the dead wood, and are scattered by wind, a risk of further infection being thereby incurred.

The Board of Agriculture would be glad if recipients of this leaflet would make it known to others interested in the subject. Copies may be obtained free of charge and post free on application to the Secretary, Board of Agriculture, 4, Whitehall Place, London, S.W. Letters of application so addressed need not be stamped.



Hardy Fruit Garden.

STRAWBERRIES.—Ripe Strawberries should be gathered daily while firm and in perfect condition, for not only are they then of superior quality, but will keep fresh longer, and at the same time the plants are relieved, and are able to develop and perfect the remaining fruits. It is, of course, indispensable to net over all beds as soon as the fruits commence to colour, but the nets must be arranged in a portable manner so that they are readily removable for gathering the fruit. Thin out any deformed, weakly, or small fruits where fine specimens are desired, and assist development by a few applications of liquid manure.

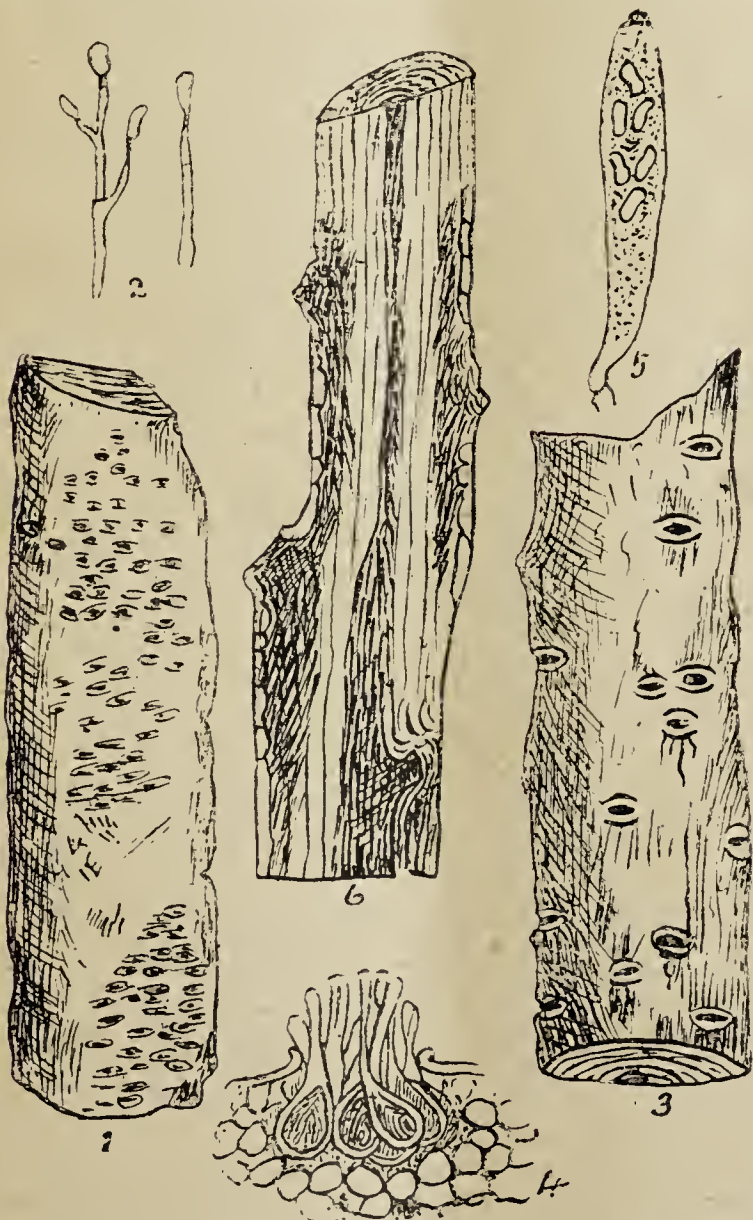
PROPAGATING THE PLANTS.—An early selection of suitable runners should be made, especially where it is desired to form fresh beds to fruit next season. Generally the most convenient method of rooting is to layer the runners into pots filled with good loam, or on the surface of squares of turf about 3in thick. In some cases where the runners are not too numerous they may be rooted in the soil between the rows, breaking up the position a little and adding some fresh material. Secure the runners with a peg or a stone, cutting off the wire extending beyond the plantlet. During rooting plenty of water should be afforded, and other runners must be prevented crowding them; indeed, as many as possible may be cut out entirely, which will permit of plenty of air and space, which is very important in preventing the leafstalks lengthening unduly and the crowns forming weakly, instead of boldly and strongly. It is important that the runners be selected from plants that have or are fruiting satisfactorily, as nothing can be more disappointing than to find plants failing to fruit. It is not necessary that the plants should be bearing exhaustive crops. Those of normal strength and medium fruit-bearing capacity are the best, and almost certain to produce runners of the proper character.

SUMMER PRUNING CURRANTS.—The suppression of superfluous growths should not be longer delayed. In the case of Red and White Currants the side growths on the main branches must be shortened back to three pairs of leaves. If extension is necessary for the leading branch a leading young shoot may be left full length, otherwise shorten in a similar way to the side shoots. Strong growths which have been produced from the old wood may be utilised to form new branches if they originate near the base. Old trees may be renovated and improved in this way. The growths, which should be selected in suitable positions, may be left full length now, shortening them in winter. Similar shoots not required cut out entirely, also any suckers issuing from below the ground. The object of summer pruning is to open up the fruit to light and air, and also to ripen and perfect the fruit buds or spurs for the succeeding season. Black Currants must be treated in a different manner if any summer pruning is carried out in their case. It is best to do it after the fruit is gathered, because, as a rule, the growths or shoots carrying the crop are those which need removal. Those it is desirable to retain for the successional crop are the strong shoots of the current season. If regulated now, or when the fruit is cleared, therefore little winter pruning will be required.

LAYING IN WALL TREE WOOD.—If the growths of Apricots, Peaches, Nectarines, Morello Cherries, and Plums upon walls or espalier fences are in a crowded condition, owing to inability to properly deal with them earlier from various causes, this should be rectified as early as possible now. It is important that this should be done, alike for the benefit of the fruit as well as the appearance and condition of the trees generally. Being properly regulated and not burdened with surplus wood, full encouragement is given for the perfecting and ripening of the shoots intended for fruit bearing. The present crop, too, has a better chance of attaining size, quality, and colour. It is best to cut out the weakly and ill-placed shoots first, retaining a number from which a final selection may be made according to the space available. It cannot be exactly determined how many are required until the fruit is gathered and the old bearing growths cut out, but a general idea may be formed.

CORDON TREES.—The summer pruning of cordon trees may be carried out now, as the leaves on the summer shoots are fully grown on the lower parts. Shorten Apple and Pear shoots to four full-sized leaves. Allow the leading growth, especially on young trees, to extend without stopping, so long as there is room.

THINNING FRUIT.—On all choice Apples and Pears grown as half-standard, small bush, pyramid, or any restricted form,



- 1.—*Eutypella prunastri*; spore-bearing form of reproduction on an Apple tree stem. Nat. size.
- 2.—Spores. $\times 600$.
- 3.—Second, or ascigerous, condition of fungus-fruit on Plum stem. Nat. size.
- 4.—Section through a group of ascigerous fungus-fruits embedded in the bark. $\times 50$.
- 5.—Ascus containing eight ascospores. $\times 400$.
- 6.—Median section through portion of the stem of a young Apple tree, showing where the fungus had entered through the unprotected ends of pruned shoots. The mycelium of the fungus had discoloured the bark and wood, and finally burst through the bark to the surface. Nat. size.

it is possible to thin the fruits if a crop has set so freely as to render it worth while to reduce the number in order to obtain superior fruits in size, form, quality, and colour. When fruits can develop beyond a medium size for the variety, they are better able to show forth the special characteristics of each. Quantity should be sacrificed for quality and appearance. It is better for the trees in a general way, imposing as it does less strain upon them. Clusters of several fruits may with advantage be reduced to two, or even one fruit on a spur. Plums ought also to be thinned to secure fine dessert fruit.—EAST KENT.

Fruit Forcing.

CUCUMBERS.—A few seeds may now be sown for late summer and early autumn produce. The plants from this sowing will afford much finer fruit during the late summer and early autumn months than plants that have been in bearing a considerable time, as old plants generally produce knobbed (seeded) fruits towards the end of the season, and are neither so handsome nor useful as straight seedless fruits. The seedlings will be fit to plant in about a month, and succeed admirably in frames with a little bottom heat, such as may be afforded by partially spent manure, mixed with a little fresh, but not rank, stable litter. It is needless to say that the plants succeed in houses or pits, such as after clearing from bedding-out plants or placing of plants outdoors, and give a supply to a late period of the summer or even autumn where there is sufficient heating power.

PLANTS IN FULL BEARING.—In order to keep up a regular succession of fruit, attention must be given to thinning exhausted growths, removing bad leaves, stopping, tying, and regulating, so as to keep up a successional growth of bearing wood. Add a little fresh soil to the surface of the bed from time to time, with a light mulching of sweetened horse droppings or cow manure, the latter dried and broken up, and sprinkle on a small handful per square yard of soot. Syringe at closing time, and maintain a good moisture all day by damping the floors in the morning, noon, and early in the evening. Avoid too much moisture in dull weather, as it makes the foliage soft, and more liable to attacks of leaf-spot fungus (*Cercospora melonis*), and the growths cannot well bear the sun after a return to bright weather. After a few days of dull moist weather it is advisable to shade, and keep the house rather close on a bright period ensuing. Supply liquid manure copiously once or twice a week, but it will not materially benefit plants sparsely furnished with roots and defective in foliage. What such plants want is fresh soil or surface dressings of lumpy material.

VINES SWELLING THEIR CROPS.—A genial condition of the atmosphere, secured by gentle warmth in the hot-water pipes and sprinkling the paths and borders in the morning and afternoon, particularly the latter at closing time, is essential for the swelling of the berries and health of the foliage. The border being mulched with a little short, rather lumpy sweetened stable manure, about an inch thickness sufficing, and this sprinkled occasionally, will give off some ammonia to the atmosphere, and nutriment be washed down to the roots at the waterings. If a little sweetened material be added from time to time, the supply of ammonia vapour and of liquid nourishment will be regular and never so excessive as to injure the foliage. If not convenient to use stable manure, the neat drainings of stables or cow houses may be diluted with six times the bulk of water, and this used for sprinkling at closing time, about 3 gals sufficing for a square rod of border or 30½ square yards. Avoid a close atmosphere, particularly in dull weather. A little ventilation at the top of the house constantly will make all safe; but it is desirable to close the house in the afternoon, damping well at the same time, allowing the temperature to rise to 90deg or 95deg, and after six o'clock provide a little ventilation at the top of the house, as it will prevent excessive deposition of moisture through the night. This will to some extent safeguard the foliage against scorching should the sun act powerfully upon the house before the ventilation is increased, which it ought to be as soon as the sun reaches the structure; indeed, it is the best preventive of scorching and scalding. A night temperature of 65deg and a genial warmth of 70deg to 75deg by day, will be sufficient by artificial means to keep the Grapes steadily progressing in dull weather. Increase the ventilation from 70deg to 75deg, allowing it to advance to 80deg to 85deg, and close so as to raise it to 90deg or 95deg. Permit a steady growth in the laterals, but never allow large extensions, which must afterwards be removed or considerably reduced. Do not allow the laterals to interfere with the principal leaves, for upon the free access of light and air depend their elaborating power, and the more these assimilate the crude material, the healthier the Vines are, and the more food storing in the Vines for the succeeding crop. It is also essential for the formation of the coming Grapes in embryo in the buds.

Supply sufficient waterings or liquid manure as required, or afford surface dressings and water them in after having made the border thoroughly moist. Outside borders must not be neglected, but have copious waterings where the rainfall is deficient. Mulch the borders lightly. Heavy coatings do more harm than good. A little stable manure, 1in to 1½in thick, will lessen evaporation,

and from its lumpy nature not deprive the soil of the beneficial action of air, warmth, and the moisture of dew and rain.

MELONS.—When old plants are in good health and free from insects they will then fruit freely on the laterals, even when the current crop is swelling, but these blossoms will not set unless syringing is discontinued, which is not advisable, so that lateral growths should be encouraged to insure fruit showing when the present crop is advanced for ripening, and these will set freely with the drier atmosphere, and the crop be somewhat advanced before, or by the time the fruit is cut. The plan is then to cut away such old growths as are useless, and concentrate the energies of the fresh growth on the young fruit. Encourage root growth. Give supports to the fruits before they become heavy, letting the table slant so as not to hold wet, and place slates beneath the fruits of plants in frames, raising them above the foliage on small inverted flower-pots as the swelling advances. Fertilise the flowers daily until sufficient fruits of equal size are set on a plant; then remove all the flowers, and reduce the fruits to three or four on a plant according to its vigour. Shade only to prevent flagging; it is most needed in bright weather succeeding a dull, moist period. Melons directly exposed to the sun are benefited at such times, otherwise they are apt to be scorched, and when ripening are all the better by a slight shade, especially when the plants do not supply moisture to the fruit from indifferent health. Repot any plants requiring it, and keep them sturdy by placing them near the glass. Keep a sharp look out for canker. It often arises from damp, and the remedy is a drier atmosphere or freer ventilation, and rubbing quicklime into the affected parts, keeping them quite dry by repeating the process.

EARLY PEACHES AND NECTARINES.—The trees having been cleared of the fruit, cut away the wood on which it has been produced to the successional shoot at the base, and stop growths making more than 12in to 14in of wood required for bearing next year, always excepting extensions, which may be allowed to grow where there is room. Pinch the laterals at the first leaf, and to subsequent as made, thinning where crowded. Syringe forcibly to expel red spider, and if necessary apply an insecticide. Admit all the air possible, and where practicable withdraw the roof lights from the earliest forced houses. Maintain a proper condition of moisture in the outside as well as inside borders.

LATE HOUSES.—It is only possible to have fruit very late by keeping the houses as cool as possible, ventilating day and night, but not in windy weather, this causing the current to rush through the house and dry the atmosphere excessively. Nothing is gained by that, but often a rich harvest of battered leaves and a plentiful crop of red spider. This pest must be laid low by forcible syringings in the morning and late afternoon, the trees having also plenty of water and nourishment at the roots, with mulchings of partially decayed lumpy manure, and these kept moist will keep the roots near the surface. About an inch thickness is sufficient.—ST. ALBANS.

Trade Note.

An Imperishable Horticultural Paint.

Mr. Chas. T. Druery, as manager of the Lubroso Paint Company, Moorgate Station Chambers, E.C., calls our attention to a paint recently introduced into this country, which is admirably adapted for the protection of wood and ironwork in conservatories or greenhouses. It is entirely distinct from oil paints, having an imperishable rubber-like body as a basis, so that the paints form an elastic and strongly adherent skin, which cannot crack, blister, or flake off, and stands both heat and damp indefinitely. As no priming is required, and two coats equal in covering capacity four of oil paints, they are very economical in application, apart from greater permanence, while their appearance is equal to the best expensive enamel paints. An enormous Continental consumption and an experience of five years demonstrates their value beyond a doubt.

Seacombe Recreation Ground.

The new recreation ground at Seacombe is a great tribute to the powers of the Wallasey District Council, marking as it does a new departure in their policy, and one that must prove of incalculable benefit to the working classes more especially. A few evenings ago, crossing over by the ferry steamer, and thence to the Ground by car, I was more than delighted to see how eagerly the various games were being contested, splendid quoiting grounds, fine bowling greens, and a host of side shows for the juniors, were evidently appreciated to the full. The shrubberies have all been planted, and most judiciously too, judging from the luxuriant growth. Standing on high ground, with the river rolling below, it is at once health-giving to those who occupy the various seats provided. There are many councils who might follow this example of providing small grounds, instead of waiting for parks, &c., which in many cases cannot be afforded.—R. P. R.

TO CORRESPONDENTS

* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

BOOK ON "INSECT PESTS OF FRUIT TREES" (J. S. and Co.).—We can recommend the "Handbook of Orchard and Bush Fruit Insects," by the late E. A. Ormerod, price 3s. 6d., from Simpkin, Marshall, Hamilton, Kent, and Co., Ltd., London.

THE LAW WITH REGARD TO CUTTING TREES, &c. (Twenty-six Years' Reader).—The principle of law is that "whoever has the soil he has all right, even to the heaven"; that is, he can deal with everything that comes across his boundary line, and at whatever height. Hence you may cut down a tree leaning from your neighbour's property across your boundary line, provided you keep well *within* your own boundary. If, however, you have a litigious neighbour, and exceed your limit by a hair's breadth, you may become involved in an action for trespass. It would be better to give your neighbour notice in writing of the nuisance his tree is causing, and ask him to abate it himself, before proceeding to extremities.

GRAPES SHANKING (A. C. B.).—As the Vines have only been planted two years we should lift them after the crop is cut, and place the roots nearer the surface in good loam with wood ashes and crushed bones mixed therewith, draining the border well, and surfacing with manure. Placing strong, fresh manure in contact with the roots and making it like a puddle, as you appear to have done with syringing, would cause the roots to decay and the Grapes to shank. As your house is only small, you could easily sponge the under surfaces of the leaves with a mixture of softsoap and sulphur. Beat some sulphur into a paste, then mix it with the solution, which may be made by dissolving 2oz of softsoap in a gallon of water. This applied to the leaves as suggested and left there for three days will destroy the red spider. The mixture should be of the consistence of cream when used.

MELON DECAYING (B. E.).—The Melon is affected by the brown rot fungus (*Monilia fructigena*), and is perhaps the first recorded instance of its affecting Melons at the semi-ripening stage. The affection has evidently taken place at the eye of the fruit, there causing a brownish discolouration in the rind, and the outgrowths of the fungus are very pronounced in the netting, where the aerial hyphae has issued and produced an innumerable number of spores. In one place there is quite a large patch of the outgrowths, become as usual flesh coloured, and in parts black, these corresponding to the sclerotia by which the disease passes over from year to year in some cases, not in all, as mummified fruits of Apples, Pears, or Plums remaining on trees on ground give rise to conidia in the spring, by which the disease is continued. We hope to be favoured with an illustration of the disease in your fruit, and further particulars of the fungus shortly.

SUPERPHOSPHATE OF LIME (T. J.).—It is more useful as a manure than bones, because it is more soluble than water. If we bury a bone it will remain almost unaltered for years; but if we break it into small pieces it decays much sooner, and if put round the roots of Cabbages will soon make them grow more fine and vigorously. Cabbages, however, are not the only garden vegetables benefited by bone manure, for phosphate of lime is one of the most constant constituents of all plants. Of this phosphate, therefore, the soil is deprived by every crop it bears, and to restore this phosphate to the soil is an object with every cultivator. It was long since shown by chemists that phosphate of lime is the chief ingredient in all bones, and consequently these by degrees have become one of the most extensively used manures. In every 100lb of sheep's bones there are 70lb of phosphate of lime; in 100lb of horses' bones sixty-eight of that phosphate; and in the same quantity of ox bones 55lb. As phosphate of lime is insoluble in water, and even bone dust is slow in decaying, it was suggested that by dissolving it in a strong acid, superphosphate of lime, a substance soluble in water would be formed, and also all the other constituents of the bone be presented to the roots of the crop in a most available form. This process is said to have been first adopted by Mr. Fleming, of Borrochan, N.B., in the year 1841. He employed muriatic acid (spirit of salt) to dissolve the bones, but it was subsequently found that sulphuric acid (oil of vitriol) was both cheaper and better.

CATERPILLAR ON LIME (R.C.).—The caterpillar is that of the Lime Hawk moth (*Smeristhus Tiliæ*) about half grown. It is not a common insect, but occurs in many localities, some near the metropolis. It is distinguished from its brethren in the family by a curious horny plate above the tail. The food is also Elm as well as Lime, and after the winter has been passed in the pupal condition the moth emerges about the beginning of June and flies vigorously at dusk.

CYCAS FRUITS (J.).—A kind of Sago is produced from the pith of *Cycas revoluta* in Japan, and the nuts are edible. *C. circinalis* also yields Sago, and the fruits, which are of the size of an Orleans Plum, are eaten in the Moluccas after being fermented and roasted. We must decline the responsibility of advising you on the question of exhibiting your fruit in a collection for dessert purposes, as there is no telling whether the judges would disqualify or not, as, so far as we know, they have no precedent to guide them in the matter.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (A. F.).—1, *Brodiaea laxa*; 2, *Allium moly*; 3, *Dianthus petraeus*; 4, *Polygonum sachaliense*. (A. W.).—*Erigeron philadelphicus*. (H. J., York).—*Alyssum maritimum* (the Sweet Alyssum).

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1903. June and July.										
Sunday ...28	S.W.	deg. 74.7	deg. 66.5	deg. 84.7	deg. 58.9	Ins. —	deg. 65.8	deg. 59.5	deg. 54.6	deg. 52.1
Monday ...29	W.N.W.	64.7	57.0	72.5	54.5	—	66.3	60.8	55.0	48.4
Tuesday ...30	W.N.W.	66.5	56.9	73.4	52.5	—	65.8	61.3	55.5	44.6
Wed'sday 1	W.S.W.	64.9	57.0	77.2	51.8	—	65.3	61.6	55.9	43.8
Thursday 2	S.E.	74.7	61.5	81.7	50.3	—	65.5	61.8	56.2	41.1
Friday ... 3	W.S.W.	65.4	56.0	69.5	58.8	—	66.3	62.0	56.6	52.1
Saturday 4	W.	62.2	53.6	70.5	49.5	—	64.5	62.0	56.8	42.0
MEANS ...		67.6	58.4	75.6	53.8	Total. —	65.6	61.3	55.8	46.3.

A week of bright sunshine with drying winds.



The "Royal" Show: The Inevitable.

To prophesy after the event is to put oneself outside the pale of the true seer. We never had that faith in cheerful prognostications of some of our fellows, and we felt we could not join with them in their bright visions of a successful "Royal." We have been doubtful about the movement from the first. Well aware as we were that the exhibitions were carried on at a loss, we could suggest no scheme, recommend no panacea, but we felt that the establishment of a permanent show ground in the neighbourhood of the metropolis was a step in the wrong direction. We wish to be distinctly understood; we do not think the acquisition of the property to have been a mistake, for possibly it will turn out a valuable asset; but what we think is the mistake is the confining of the show to one neighbourhood year after year, and that neighbourhood not an agricultural one—essentially, we may say, a "desirable residential district."

We always understood one great object of the show was education—to show to the untaught and uninitiated, by means of a huge object lesson, what were the best and highest types of all the endless varieties of live stock, brought together by the most celebrated breeders, and exhibi-

bited in the very pink of perfection. There, too, would be found every conceivable kind of machinery which, directly or indirectly, facilitates the work of the farm, exhibits by no means confined to England, but the witty inventions of the cosmopolitan. Feeding stuffs, fertilisers, vehicles, horse trappings, and a thousand and one things too numerous to mention. It is at the Royal and other shows of large dimensions that all these treasures are congregated, and for whom? The man with the long purse, the man to whom the expense of railway journeys were as nothing? No, we hold that in this instance the catering was done for those poorer stay-at-home agriculturists to whom the great show and its adjuncts would come as a revelation. As an itinerant exhibition it took year by year its glorious wealth of objects to the doors of those who otherwise would never have a chance of seeing such things. The shilling day of the Royal was a royal holiday for all the rustics within a wide radius, and it is marvellous how much they would manage to see between sun and sun. The class a little above the labourer would perhaps allow themselves the treat of two days, and the members would avail themselves of the full privileges conferred by their ticket of admission.

The shows would be but poorly attended if they depended entirely on the presence of the male element. The ladies are catered for, and show up in great numbers. Many of them are keen judges of stock; some of them are exhibitors, and all are interested in the working dairy. Some go to criticise, some to learn, and the influential farmer's wife will be equally as interested as the woman from her husband's cottages. Hitherto every country district has had its turn; the big show has been, and certainly left its mark. Now, how can it be hoped that these simple country folk can get themselves up to Park Royal? It is an impossibility; and, after all, it is the shillings of the groundlings that swell the receipts.

When, twenty-four years ago, the Royal was held at Kilburn, the windows of heaven were opened, and down came the deluge—pitiless rain, unfathomable mud. Of course, everyone said the weather alone was responsible for the short attendance. When, in 1886 (that is the date we believe), the show was in Windsor Great Park, the intense heat was blamed. This year at Park Royal the weather was perfection, real outdoor weather, after much wet and storm and cold wind; weather to tempt people abroad, and yet where were the multitudes? Alas! that it should be written, they failed lamentably to present themselves before the turnstiles. The teeming hordes of London would not be drawn forth from their haunts. The objects and aims of the society find no response in their breasts. Give them Olympia, Earl's Court, Buffalo Bill, Barnum, that is more in their line. They can see no beauty in the faultless symmetry of form in the stock. They might be amused at some odd variety—say, horned sheep, Liliputian ponies, or some "American notions" among the machinery; but the real lessons of the show are quite lost upon them. We doubt whether people quite realise how small the attendance has been. Since the year 1860, of the forty-one shows held, only two have been less attended than this London one, and they were held at very out-of-the-way places; namely, at Bury St. Edmunds and Taunton. Here are some figures for previous years. Carlisle and Cardiff were both at extreme points; Maidstone ought to have drained the metropolis; Birmingham was a fixture arranged in a hurry. We will not analyse the days with their three classes of admission price, we just take the totals:—

1903, London	...	...	...	...	65,103
1902, Carlisle	...	...	...	...	93,187
1901, Cardiff (galiant little Wales)	...	...	...	...	167,423
1900, York	...	...	...	...	87,511
1899, Maidstone	...	...	...	...	68,576
1898, Birmingham	...	...	...	...	98,277
1897, Manchester	...	...	...	...	217,980
1896, Leicester	...	...	...	...	146,277
1895, Darlington	...	...	...	...	100,310

These figures are significant. We gave the people Royalty, we gave them a Khedive, and yet they were not satisfied. To give the show a local colour there were trotting competitions for cab horses, and there were also prizes offered for the best two or four wheeled cab horse. There was horse leaping, there were "four-in-hands," parades of prize stock, excellent music, and peerless weather. We hear those in authority talk of "educating" the Londoner, and so making him appreciate the show. How is it to be done, and why should it be done? How to do it might be answered thus: Make the show proper subservient to an

outdoor variety entertainment; erect big wheels, have sensational acrobats, import freaks, have Roman chariot races, ransack history for curious spectacular effects, wind up with fireworks and free beer, then the multitude would come; but it would be time that the Royal forfeited its charter. It has hitherto been a meeting for business and pleasure, to be worked at a profit if possible. The expenses this year must have been abnormal, and the receipts terribly small. Of course, next year's show will be run at less expense; but what about those north country exhibitors who have been absent? Will the road be more open to them than it was last year? We fear not. Exhibiting is always more or less a risk, and a long railway journey adds materially to that risk. For the winter fat stock shows distance is not of much moment, for the stock is bound for that bourne from which there is no return.

This permanent fixture at Park Royal will, we think, have one good effect on local shows. Owners will concentrate their forces on the home and local show. They will be inclined to leave London for the home counties. We are rather reminded of parental relations—the father in course of time relinquishes his duties and relegates them to his stalwart sons. We think no worse of the father for his graceful retirement, and the sons infuse new blood into the old business. It is well when fathers know when to retire!

We are rather disposed to think that the Royal, having shown the way in the matter of shows, might usefully devote its energies to other means for the betterment of the agricultural community. Is there no means by which education may be stimulated? Can no help be given to hardworking men who only need a little capital to ensure their success? Have all available means been taken to stamp out disease? Do we know all that is possible to know respecting the best modes of cultivation? Are we, in fact, as much "up to date" as European countries and the lands beyond the seas? We doubt it.

There is one new feature at the Royal which may tend to increase its popularity as time goes on, and that is the auction sale for stock. The intelligent foreigner is always on the look out for a "good thing," and should the reserves be not too high he will be a likely buyer. Against that theory will be put the fact that already the foreigner knows where to go for what he wants. He is quite in touch with the principal breeders, and is a welcome guest at their hospitable homes. We know what a feature the sale ring has become at the Shire and other horse shows at Islington, and it may be in this fact will rest the salvation of the Royal.

Work on the Home Farm.

Hay cutting and making has largely occupied the past week, and with glorious weather for it, everything has gone well, a nice quantity is in stack, and a great deal more in process of making. In fact, the hay harvest is decidedly forward about here, and some good stuff is being got. Clover bulks up well, but grass hay is much lighter than most farmers expected, and, as regards this district, will certainly not exceed the average, if it reaches it.

The last two weeks have seen great progress made by all grain crops. All the forward Wheat is fully shot, and looks very well, it will be ready for cutting a little earlier than we expected. All the best Barleys are shooting nicely, and present a promising appearance, but they are not so forward as Wheat.

Swedes want rain again rather badly; they are not growing as fast as we should like to see them, and do not get big enough for striking. Common Turnips are growing past them; even the last sown are up, and showing beautifully in the row, and whatever may be the result as regards Swedes, common Turnips are a certain crop. There has been no fly trouble since the rain, a most satisfactory circumstance. The horses have been occupied with the hay, but we have always managed to keep two skeries running amongst the Swedes and Turnips.

There are one or two fields of Potatoes yet unearthed up, but, as a rule, work amongst this crop is always on until lifting time comes. Crops are looking well, thanks to the fact that we escaped both frost and flood. Early Potatoes are just ready in the gardens, but the second earlier in the fields will be some time yet. No doubt growers will not be lax at marketing them as soon as they are large enough for profit.

We are feeding our horses largely on Tares, and as the cow pasture is showing signs of becoming bare shall add some Tares also to the cows' ration. A good armful of Tares at milking time saves grass, and helps to keep up the milk flow. Butter is cheap now, but July is a month when the tide of prices generally turns. Cows must have plenty of fresh water now, or the milk pails will show the neglect. Pigs in the yard are living on Mangolds and Corn. They, too, require plenty of liquid in hot weather. Old or separated milk may be mixed with water for this purpose.

BEDDING BEGONIAS

SPECIAL LOW PRICES. ALL OUR OWN RAISING.

SINGLE MIXED , started	20/- per 100
.. to colour .. in pots ..	25/- per 100
.. in pots ..	30/- per 100
DOUBLE MIXED , started	20/- per 100
.. to colour .. in pots ..	25/- per 100
.. in pots ..	35/- per 100
.. in pots ..	40/- per 100

CATALOGUE ON APPLICATION.

JOHN PEED & SON, WEST NORWOOD, LONDON, S.E.

CABBAGE SEEDS

The Best and Hardest Variety is

Dicksons Perfection, 6d. pkt., 1/6 oz.

Also highly recommended—

DICKSONS NONSUCH, 4d. per pkt., 1/- per oz.
ELLAM'S EARLY SPRING, 4d. per pkt., 10d. oz.
MEIN'S No. 1, 3d. per pkt., 9d. per oz.
WHEELER'S IMPERIAL, 3d. per pkt., 9d. per oz.
MYATT'S EARLY OFFENHAM, 3d. pkt., 9d. oz.

PRICED CATALOGUE Post Free of all other Seeds for present and later sowing.

DICKSONS SEED GROWERS, CHESTER

BY SPECIAL APPOINTMENT



TO HIS MAJESTY THE KING.

HUGH LOW & CO., BUSH HILL PARK, MIDDLESEX.

BEGONIAS.

The best test of quality is "Repeat Orders." These we have had from many customers for the last twelve to eighteen years in many cases annually. 50 Gold and Silver Medals, including the R.H.S. Gold Medal for Begonias only. Our Speciality Collection: Double, 30/- per dozen; Single, 24/- per dozen; named or hybrid Seedlings. Descriptive Catalogue free.

B. R. DAVIS & SONS, Begonia Specialists, Yeovil, Som.

The Royal Nurseries, Maidstone, Kent.

GEORGE BUNYARD & CO., Ltd.,

Are now Booking Orders for early delivery of the very best

NEW AND OLD STRAWBERRIES

In pots for forcing, or as runners for open culture, true to name.

They offer the Largest Stock and the Best Plants in the Trade.

REVISED CATALOGUE, including the New Perpetual Bearing Kinds, now ready, free.

ORCHIDS.

CLEAN HEALTHY PLANTS AT LOW PRICES.

Always worth a visit of inspection. Kindly send for Catalogue.

NEW LIST NOW READY.

JAMES CYPHER, Exotic Nurseries, CHELTENHAM.

NO MORE MALARIAL FEVER

OCIMUM VIRIDE.

THIS is found to effectually expel Mosquitos and keep man free from Malaria. Send for "THE TIMES" and "NATURE'S" Reports of this wonderful plant, which is unquestionably a blessing to mankind. We possess, and shall be pleased to supply, Seeds (direct from Nigeria) per Small Packet, 5/-; Plants, 5/- each. Particulars sent free.

H. CANNELL & SONS, SWANLEY, KENT.

LONDON FERN NURSERIES,

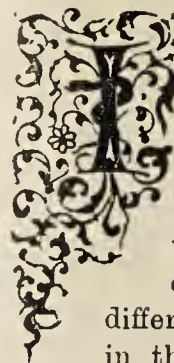
LOUGHBORO' JUNCTION, LONDON, S.W.—Stove and Green-house Ferns, large and small, in var., Aralias, Grevilleas, Cyperus, Ficus, Ericas, Palms, Dracenas, Aspidistras, Roses, Azaleas, Carnations, Crotons, Camellias, Chrysanthemums, Cyclamen, Bouvardias, Asparagus, Araucarias, Solanums, Aspidistras, Cinerarias, Genistas, Marguerites, Geraniums, Primulas, Orange Trees, &c. Trade, send for Wholesale List. Special Retail Catalogue, free.—J. E. SMITH.



Journal of Horticulture.

THURSDAY, JULY 16, 1903.

Garden Visiting.

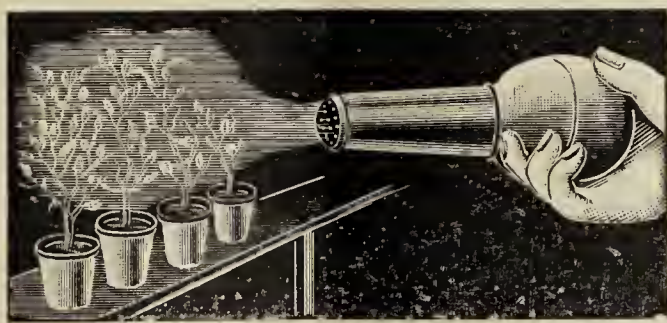


IT is the desire of the majority of people when they take a holiday to strike new ground and see fresh scenes that present a change from the things with which they are brought into daily contact; but the average gardener differs from the rest of his fellow men in this respect. In short, he is a "shoppy" animal, and the one great theme of his life is a garden. If two gardeners meet they talk shop, if a hundred are congregated together they split up into little groups and do the same thing, no matter what the particular occasion may be. It is no good blaming them, for it is a trait of the craft, though somewhat tedious to the gardeners' wives if the ladies happen to be present. Perhaps this is why gardeners' wives do not accompany their husbands on holiday excursions so much as the better halves of men engaged in other occupations.

As an illustration of the gardeners' propensity for talking shop, I recently accompanied a brother craftsman in looking over a factory containing some very intricate and interesting machinery. Our guide spared no trouble in explaining the mechanism of the machines, and while engrossed in the examination of them I did not observe that my friend was missing. However, we found him a few minutes later discussing the merits and conditions of a miserable looking Geranium that was growing in a pot in one of the factory windows, along with one of the workmen. He apologised, of course, but I believe all along that he was thinking more about that plant than of the machinery we had come purposely to see.

To many gardeners a holiday necessarily means a round of visits amongst professional friends and acquaintances, and a series of

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.



WEST'S COMBINED HAND FUMIGATOR AND POWDER DISTRIBUTOR,
2/6, with Tobacco Paper, Post Free.



WEST'S PATENT FUMIGATOR
Complete, post free, 9d.
(See Catalogue for West's Extract of Nicotine.)

EVERLASTING DOUBLE CRIP STAKES for instantly staking all Plants. From 5/- per gross, carriage paid. Send P.C. for a Free Sample and yourself decide on its merits. It will cost you nothing, and prove to you that

WEST'S PATENT GARDEN SUNDRIES

Buy from the Manufacturer of all Horticultural Sundries—

C. E. WEST, ROUNDHAY.

Or direct to the Works, HIGHAM HILL, LONDON, N.E.

CATALOGUE, containing 50 large pages, with 100 Illustrations, with Hints on Horticulture, post free.

Plants protect,
Money Save,
AND
Labour Ease.

garden examinations. There is no compulsion about it, but it is just a matter of custom, and the gardener returns to his home quite contented with his outing. In fact, it is just his way of spending a holiday; and if he enjoys it I can see no reason why anyone else should complain.

There is a peculiar unwritten law of freemasonry which gives to gardeners the privilege of visiting each other's places ad lib, with a reasonable certainty of receiving a welcome and a readiness on part of the person visited to drop whatever task he may have in hand and show you round. If a member of any other occupation were to visit a gardener, about whom he knew but little, he would probably get straight looks and a stiff welcome; but tell the man that you are one of his own calling, and have just come for the purpose of looking round, and all reserve vanishes like vapour. As gardeners you are friends at once, and if by any chance you should happen to have lived in the same bothy at different periods the friendship develops itself into that of quite a bosom character. Nor is there, moreover, any half-heartedness about a gardener when he is surveying the charge of a brother craftsman. He takes a deep unfeigned interest in things, and if it is a characteristic of gardening human nature, for the individual visited to enlarge on the rough condition of the place when he took charge, and the improvements effected since, it is all part of the programme, and the visitor knows that he will have the privilege of doing the same thing when his friend calls on him in turn.

In its way the gardening press encourages garden visiting by publishing descriptions of different gardens from time to time; and though it is no wish of mine to quarrel with the editors for doing this, I am afraid these descriptions are not always very interesting to read. It is, of course, instructive to hear of fine establishments, but I am afraid that when the account of the visit appears on paper it often flavours rather too much of the personal. The world at large is not particularly interested to learn that Mr. So-and-So has got a fine batch of Chrysanthemums coming along, or a houseful of forced Beans free from red spider; and I mention this as a hint to those who describe gardens, to confine themselves to features of general interest and leave out details. They can keep the minor points for themselves, and find plenty of interest in discussing them with the chief of the garden visited.

I am afraid also that garden visiting is not always prompted by a purely friendly and neighbourly spirit, and I am inclined to think so because I once served in an establishment which had a reputation at that time for Chrysanthemums. Just before the shows came on in the autumn hardly a day passed but that a gardener or two dropped in, presumably to have a look round, though they took little interest in anything but the 'Mums, and the most curious thing was that almost without exception they were growers and exhibitors themselves. Of course, there was nothing out of order in the visits, and they only wanted to see how things were looking in view of the coming shows; but, bless you, they wouldn't have admitted that for anything.

I can imagine nothing more tedious to a person who is not interested in horticulture than to go round an establishment with a pair of gardeners. In the first place, they generally do the round very leisurely, stopping continually to argue of some little thing, and going back a few yards to examine something that has been overlooked. Perhaps they are old friends, and one drops a remark relating to some incident which happened in the long ago. It is quite enough, and the whole matter has to be lived over again, to the intense enjoyment of both of them. Mutual friends, too, have to come under discussion, and sympathies are extended to poor old So-and-So, who managed to lose his place, and was not fortunate enough to secure another one. This is part of the loyalty of the craft. Brothers in misfortune are neither forgotten nor overlooked, and the welfare of both the unfortunate and the successful are freely discussed when one gardener pays a periodical visit to the establishment in charge of another.

Being a gardener I willingly and readily admit to have inherited the weakness for visiting other people's gardens, but I have a decided inclination for the establishments in which I have lived and laboured in the past. This I take to be a source of great pleasure to many gardeners, for there is a peculiar sentiment that attracts you to the garden with which you have been connected in the years that are gone. Old familiar scenes strike you in a new light, you take interest in the changes that have been made in the meantime, and note the result of certain operations, for

the performance of which you were perhaps responsible. Generally, amid the changes that take place in gardening establishments, the labourers, or some portion of them, remain till old age or rheumatism necessitates their retirement, and when you visit the place after an absence of years they welcome you with a smile of unfeigned pleasure, and the grip of their horny hands is of a true and honest character. The man who has no sentiment in his soul is an individual to be pitied, for a good deal of the quiet pleasure of this life is obtained through the medium of the attribute which some people treat so lightly. Depend upon it also that the gardener who leaves a place without leaving a friend behind him, or no one to welcome him back or take an interest in his welfare, is a person whose shortcomings it is not well to inquire into.

Through the very nature of his occupation the gardener is a nomad, who flits from place to place with no surety of settling long anywhere. It is true there are many who stay for a lifetime in the same establishment, but this is their good fortune; and others, through a variety of circumstances common to the craft, have to pack their belongings again and again, and pass on to fresh scenes of labour. It may be taken for granted that these men do not forget, and when circumstances permit they take pleasure in visiting the old scenes and renewing the acquaintanceship of old friends. Sentiment may prompt it all, but I take it that it is this spirit of freemasonry and good fellowship that is responsible for the gardener's weakness for garden visiting.—H.

Campanula garganica and its Varieties.

For planting in the rock garden, or on the rockwork edging of the flower border, we have no prettier little summer flower of creeping or trailing habit than the Gargano Harebell, as *Campanula garganica* is popularly called. It is more suited for these purposes than for planting on the level surface of the border, but it might be used to form a small bed by itself, and in this form it would be a pleasing thing for a good while during the summer months. The whole plant is rather downy, and it has kidney-shaped radical and heart-shaped stem leaves. These stems are trailing, though they are not of excessive length, so that a few plants together would make a good appearance anywhere when in bloom. The flowers, which are of good size, are of a brilliant blue-purple, with white centres, and are produced in great numbers. The actual height of the plant is only a few inches, rarely exceeding six, and it is thus one of the most useful of our dwarf flowers, from June onwards, when it comes into bloom. There are three well-marked varieties of *C. garganica*, the first to be named being the white-flowered variety of the type, and of exactly the same habit, but with white flowers. It is in every way as free as the blue form.

Campanula hirsuta, sometimes called a species, is even more charming than the type. It is densely covered with greyish hairs, which give quite a downy effect to the plant. Perhaps it is owing to these hairs having a deterrent effect upon the slugs, but these pests, which attack the typical plant when in gardens infested by these vermin, do not attack the hirsute form to any extent. The flowers are a lighter blue-purple than those of the type, and the whole plant is more slender and elegant in appearance. There is now in cultivation a scarce variety with white flowers. This has just been sent out from a northern nursery, and having seen it in bloom before it was for sale, I have been glad to secure it at the first opportunity. Its flowers are pure white, and it seems to be a good doer in every way. There is a considerable amount of variation in the plants of the species, but the four named may safely be taken as forming the main types of all the forms. *Campanula garganica* was originally found by Tenore on Mount St. Angelo, near Naples, in Italy, and it received its name from the old name of the mountain (Mt. Garganus). As already said, it is commonly known as the Gargano Harebell; but another, and more pleasant sounding one, is "the Harebell of St. Angelo." It was introduced in 1832. The cultivation of *C. garganica* does not present much difficulty, although it prefers a dry and sunny position, and excessive moisture is decidedly injurious to it. I find it grows more vigorously if treated occasionally to a little fine bonemeal, well watered into the soil; but this is not necessary in all gardens, and would be injurious in many. It is easily increased by seeds or by division, the latter being performed in spring. It may be said that it is sometimes beautifully grown in hanging pots and baskets, though the popularity of *C. isophylla* and *C. fragilis* has retarded its use in this manner.—S. A.



Phaius × Chapmani superbus.

This is a hybrid from *P. Phoebe* and *P. Humboldti*, and was staged by Norman C. Cookson, Esq. (gardener, Mr. H. J. Chapman), at the Royal Horticultural Society's show on June 9, when a first-class certificate was accorded. Another form, not so good, and named simply *P. x Chapmani*, received an A.M. at the Temple Show. The one here figured, from a drawing by Mr. Shayler, has a purple lip with a brownish-orange suffusion on either side of the column. The sepals and petals are purplish mauve. Mr. Chapman is very keen on *Phaiuses*, and has a fine set of hybrids advancing.

The Week's Cultural Notes.

Oncidium Lanceanum, now coming into flower, is a very charming species, but unfortunately few growers have the knack of managing it successfully. The plant has no pseudo-bulbs, but consists of loose, leathery spotted leaves rising directly from a stout rhizome. I have found it just as necessary to get these leaves properly consolidated as it is to ripen the bulbs on plants that carry them; and much of the dreaded spot that attacks *O. Lanceanum* may be prevented by this simple means.

It may seem a very unimportant matter, but there is no doubt than an hour's drying both of the roots and leaves every day would conduce much to the well-being of these warm house *Oncidiums*. If they are suspended keep the syringe away from them when damping, and as far as possible, without injury to other plants, allow the atmosphere of the house to be warm and dry for an hour or so. Then, when closing the house, do so with very ample moisture, syringing the plants overhead, and damping well about the pots, baskets, stages, and all dry places. The heat will probably run up very high, but no harm will come to the plants if the blinds are drawn up and the sun allowed to shine full upon them, for the moisture rising and settling on the glass forms a film that breaks its rays a little when the ventilators are closed.

Unlike some *Oncidiums*, *O. Lanceanum* usually carries its flowers easily until they fade, though in the case of plants not fully established or out of health it may be well to remove the spikes after about a week's inflorescence, and they will then last well in water. Another species requiring as much heat and even more light is *O. Jonesianum*. This is a block plant, thriving best on rough pieces of cork or Apple wood, with only a little sphagnum about the base of the pseudo-bulbs. These latter are very diminutive affairs, and appear at the first glance to be only a continuation of the rushlike foliage. The flowers of this species must not be allowed to remain too long on the plants.

With the great heat just now, it becomes difficult to maintain a sufficiently low temperature in the cool house. Garden mats placed on the glass instead of the usual blinds, and kept wet, are a great help, while ample ventilation night and day is necessary. Light syringing overhead and constant damping of the floors and stages is very refreshing to the plants, but heavy syringing should in all cases be avoided. Disas advancing for flower must be kept very moist at the root, and the stems and leaves must be frequently sponged to keep them free of aphids. A light fumigation just before the flowers open is always an advantage.—H. R. R.

Book Notice.

"Orchids, their Culture and Management."

Since the first introduction and the general culture of Orchids, many books have been published concerning these "foreign weeds with barbarous binomials," some appealing to the botanist only, others written for the cultivator, amateur and professional, and others again for both botanist and horticulturist. It is not too much to say that there are few other books within the reach of the English reader which will tell him so much, and tell it so well and clearly, of the best methods of forming and managing a collection of Orchids in the best and most up-to-date manner than this book, which is a new edition of Watson's "Orchids," revised and in the main rewritten by Mr. H. J. Chapman.

For the horticulturist Mr. Chapman has done good work here. He is well known as a skilful grower and hybridist of Orchids, and he has placed at the disposal of his fellows the knowledge and experience laboriously gained by observation and experiment during more than a quarter of a century. No one who has any knowledge of the collections of Orchids which are and have been in his charge can doubt that he possesses the secrets of success; no one who studies this book can doubt that he is willing to share them with his readers.

As in the original edition, the main portion of the work is occupied with accounts of all the genera, species, varieties, and hybrids which are likely to be met with in any collection, and these accounts are so full, so much fuller than in the first edition of the book, that it would be difficult to find an Orchid in cultivation, even a botanical curiosity, which is not here dealt with. They are arranged in alphabetical order. In all cases are given, first, a general account of the genus, with origin of the generic name, generally the conditions under which

the plants grow in their native homes, and then the conditions under which they do best in our Orchid houses. This is followed by a description of the various species in cultivation, and where any particular species requires different treatment from the others it is carefully noted. An excellent feature is that the name of the sponsor of each species is given, and all the synonyms are recorded. Looking at the confusion which exists amongst horticulturists with respect to specific and even generic names (of Orchids especially), this is a feature which will be specially valued by those who like to call things by their right names, as well as by those who sometimes buy a plant under one name, only to find out, too late, that they already have it under another.

Examples in plenty can be called to mind by any lover of Orchids. It is well to understand, under the authority of Mr. Rolfe, that the plant we know by

the name of *Phaius Warpuri* is really *P. tuberosus*, and the plant we commonly call *P. tuberosus* should be named *P. simulans*; also that the *Phaius* which we all call, or have called, *Sanderianus*, is but a variety of *P. Wallichii*, and the editor might have added that both the latter are but local forms of that old favourite, *P. grandifolius*. This is but instancing a small corner of one genus. Throughout the book the same good work is consistently done, and it must have been done at the cost of great patience and much research.

Since the date of the first edition of the book, 1890, Orchid hybrids, of merit and of no merit, have enormously increased in number. Mr. Watson described thirty-four hybrid *Cypripediums*; Mr. Chapman gives a list of over 900, with the names of

* New edition, revised and enlarged, by H. J. Chapman, member of the Orchid and Scientific Committees of the Royal Horticultural Society. L. Upcott Gill.



Phaius × Chapmani superbus.

their parents. In the first edition not a single *Odontoglossum* hybrid is mentioned; in this a list of fifty is given, with their parents, recorded or supposed, together with about twenty synonyms. The records of hybrid *Dendrobiums*, *Cattleyas*, *Laelias*, and of all others whose hybrids are known, have been laboriously disinterred from the Royal Horticultural Society's Journal, the horticultural magazines, and wherever they were buried, and carefully catalogued for the benefit of the reader. For this alone the editor deserves well of all Orchid growers.

The illustrations of flowers are numerous, and most of them excellent. Many which were used in the first edition have disappeared. The greater number of those to be found in the pages of the new edition are from photographs by the editor, and amongst them are some which will be accepted as things of beauty by any reader, and which the practical photographer who knows the flowers will recognise as good examples of the photography of coloured objects. It is not alone that the light and shade have been well managed, producing finely graduated pictures with full ranges of tones, but there is clear evidence of the use of colour sensitive plates and light filters to suit the flowers to be photographed. A glance through the sections devoted to *Cattleyas*, *Odontoglossums*, and *Cypripediums* will furnish good examples. The book contains also twenty coloured plates. Where illustrations of flowers are not given the reader is referred to some other publication where an illustration is to be found.

The earlier chapters deal with Orchid houses, shading, watering, damping, ventilation, and all the mysteries of management. A description of the treatment of imported Orchids, a recommendation of many Orchids as town plants, and a chapter on insect pests follow. Then comes a very interesting botanical description of Orchids, and this is succeeded by a very full account of Orchid hybridisation. A great deal of this portion is new; not only new to the book, but new to publication. The writer has been so successful as a hybridiser that a great many people will be glad to know his methods of pollinating the flowers, germinating the seeds, and growing-on the plants. A short chapter on the question of the applicability of Mendel's Law to Orchids closes this section of the book. This is largely argumentative, and the writer has fallen into a curious error as to this law. But much wise advice is given to the beginner in the last chapter of the book as to the plants he should begin with, and how he should begin with them. And many who are not beginners, in point of time, will gain much from this chapter, whose only defect is that it is not long enough.

The taste for the cultivation of Orchids is still growing, and it is safe to say that many more will be gathered into the ranks of Orchid enthusiasts by reading such books as this, for Mr. Chapman shows that simplicity is the key to the cultivation of these plants. A clever Orchid grower once said to the reviewer, "Give Orchids just what they want, and they will grow like Cabbages." Now, they do not want many things, but they must have what they want if they are to thrive, and some of the things they want are not quite what most other plants want. Mr. Chapman tells what these things are, and, like John Parkinson of old, apothecary of London, he leads his reader through his garden of pleasure and shows him the "divers outlandish flowers, that for their pride and beauty are to be planted in gardens of pleasure for delight," and recounts to him their "nature, names, and virtues," as well as their native homes.

Early Potatoes from Ireland.

Ireland is following in the wake of England in an attempt to raise new Potatoes early, and in quantity, for sale to English dealers. At Clonakilty, in the South, several growers laid down land for this purpose, and as the result they have done remarkably well. The crops have turned out successful. A fortnight ago the dealers went into the district from England, and bought up the growing crops as they stood, paying at the rate of £40 an acre for them, and undertaking all the expenses of lifting and marketing the tubers. At this price whole fields have been purchased, and the Irish farmers are jubilant at their success. A crop that will secure £40 per acre net, from buyers, must be a paying one for cultivators. Further, as the result of the tests, the Irish Potato growers say they can market their early Potatoes a week or a fortnight earlier than the English growers do. They intend in future years to extend operations considerably. In trade distributive circles the success of these South of Ireland Potato producers has caused some excitement, for the areas suitable for the business in County Cork, and elsewhere, are more extensive. Dealers see that early Potatoes from this new centre will certainly affect production. The handsome margins left over after allowing for all expense in culture has somewhat surprised even the Irish Potato raisers themselves. Next season the output will be trebled at least, and within a year or two probably thousands of acres will be devoted to the crop by local growers. When the usual expense of railway carriage, salesman's commission, and market tolls are considered, it will be seen that the price paid is really equal to £50 per acre.

Strawberries in Pots.

For securing sturdy runners, early planted ones of last year afford them soonest and best, especially when not overcropped and not neglected for watering. The plants should have shown blossoms, because runners from fruitful plants always turn out better than those from fruitless strong-growing parents. The runners may be (1) layered in the fruiting pots, (2) on turves, and (3) in small pots. All three plans are good. In any case it is essential that the first runners, which give the finest plantlets, should be selected, and that they should be induced by watering to emit roots freely at once, so that they may, by judicious attention, develop into sturdy plants and form good crowns. If layered into the largest pots they need not be detached until thoroughly established. Those layered in turves or 3in pots should as soon as rooted properly be detached and stood in a shady place for a few days, preparatory to shifting them into the fruiting pots. These may be 5in for early work, and 6in for succession or late forcing, for nothing is gained by using large pots.

For very early forcing Black Prince still holds pre-eminence as the earliest, but is very prone to mildew; otherwise, though small, is of high colour and excellent quality, forcing well. La Grosse Sucrée, however, is unrivalled for very early forcing, as it both sets and swells the fruit well, this being of good size, colour, and quality. Vicomtesse Héricart de Thury also sets well, swells to a good size when the fruits are well thinned, and furnishes fine glossy fruits of excellent quality. Royal Sovereign may be regarded as an earlier and improved Sir Joseph Paxton, and everything that can well be desired in "cropping," colour, and quality. Where few Strawberries in pots are grown it may be given place for those previously mentioned. For home use, and when true, Keen's Seedling is yet far from superseded, its cropping, deep colour, and fine quality always pleasing. Sir Harry is of similar ilk, cropping well, large, and well flavoured. President has plenty of size and good looks, and the quality first-rate, but has a bad habit of "spotting." Auguste Nicaise is perfect as a plant, the fruit large and of good colour, bears well, and the quality not indifferent, yet is excellent for supply and appearance. Sir Joseph Paxton affords full crops of large and first quality fruit, as a midseason or rather late forcer, being particularly fine grown on shelves in unheated fruit houses. For brightness of colour Sir Charles Napier stands supreme, not any having so bright scarlet face, and though a heavy cropper, and large, handsome appearance, has only a brisk flavour. Empress of India is also bright scarlet, with a flavour approaching British Queen, and ripens a fortnight or three weeks earlier, a great point in forcing. James Veitch, very large and handsome, has only moderate flavour, but forces well, especially midseason, dishes of noble appearance counting at parties.

For late forcing British Queen is supreme, Dr. Hogg being a better plant, with large fruit of the exquisite "Queen" flavour. Veitch's Perfection combines deep colour with the quality of British Queen. The foregoing are the cream of Strawberries for forcing, though good accounts are given of Souvenir de Bosuet, with medium-sized fruit, globose conical, red skin, and luscious juicy flesh, plant a vigorous grower. For cool houses mention may be made of President Delacour, large, heart-shaped, bright orange scarlet fruit and excellent flavour, also of Auguste Boisselot very large oval, deep red, and richly flavoured. Enough, and possibly more than many will require, has been given, but selection can be made, and if not in stock, most can be secured by early orders to nurserymen, in small pots, and shifted into the fruiting ones as soon as they can be had well rooted will give good results under proper management the following season.

The pots must be clean inside and outside, have a large crock over the opening, preferably a worm excluder, three or four of lesser size, and some smaller still, so as to form about an inch of drainage. This should be secured with the rougher parts of the compost rammed tightly down. Turfy loam, strong rather than light, must form the staple of the compost. Break it up roughly, adding half a pint of bonemeal (steamed), a pint of soot, and a quart of wood ashes to each bushel of chopped up loam. If these ingredients are not to be had, the advertised fertilisers answer equally well, following in each case the instructions given with them. Let the compost be moderately dry when used, for if wet it will shrink after potting, leaving the sides of the pot. Bring the soil up to the required height in the pot, ram it firmly, and finish, so that the base of the crown will be about half an inch below the rim, which must be left clear for watering, allowing a little more for the 6in than for the 5in pot. Stand the pots on a hard base in an open situation, but sheltered from strong winds, with sufficient space between them to allow the full exposure of the foliage. Give water as required, and sprinkle the foliage for a few days after potting. If this be followed each evening, it greatly assists the plants. When the roots are working freely in the fresh soil copious supplies of water will be needed, always giving sufficient to moisten the soil through to the drainage. The plants must not be allowed to flag, and the soil ought not to be soddened by needless waterings. Remove all runners and weeds as they appear.—G. ABBEY.



Strawberry Plants at Cork Exhibition.

I have to thank you for the complimentary remarks you have so kindly made in your last issue in reference to my bed of specially prepared Strawberry plants at the Cork Exhibition; but your reporter is in error in the name of the variety, a single plant of which gave the extraordinary crop of eighty-one berries when only one year old, as Latest of All; it should have been Laxton's Fillbasket.—J. F. WILLIAMSON.

Back to the Land.

In a footnote to his letter, "Owner and Tenant" asks me to "explain why Henry George's philosophy would, if practically applied, tend to national suicide." The practical application, I apprehend, is the primary difficulty, and even should that be overcome so far as to get the scheme afloat, there exists no precedent to guarantee success or to estimate its consequences. Such, in a general way, stands Henry George's philosophy in relation to the land, and as there exists a doubt of its success it is by far the wiser course to continue one which is supported by use and wont than launch in one whose details must be impossible to compute. It is a great scheme, and all great schemes are necessarily more or less complex; indeed, often so much so that experience alone can give an idea of the variety of ways they may operate. And in this particular case the question becomes to every thinking person one of more than ordinary complexity. We grope here, there, and everywhere for a precedent, and find none. We feel assured that the land originally was the property of the people, still the assurance does not justify us to take practical steps to re-establish a similar order, for from what can be inferred from the state of matters under that primitive régime such a course would not commend itself. But apart from this, there are certain indications of Socialism which permeate the Henry George doctrine. Instead of it being an accumulative power, it is a dispersive one. Wealth, effort, and energy, instead of being conserved into consolidated power, are divided into individual enterprise. The age for individual enterprise has given way to one of combined action, just the very reverse of individual action. "Owner and Tenant" may think my anticipations unnecessarily gloomy, and perhaps groundless, and may say, with plausible reason, that as the scheme has not been tried the result can only be conjectural at least. Precisely so, but the straw tends to show the direction of the current.

Again, and apart from the cumbersome and impracticable nature of the regulation of the machinery connected with nationalisation of the land, there are various other productive laws which make their force felt under special circumstances like those under consideration. Multiplication of effort in the production of foodstuffs would naturally increase produce, but would not necessarily increase the wealth of the producer. On the contrary, the tendency would be towards a diminishing of his wealth. Of course, it is open for argument that the land might be utilised in a variety of ways for the requirements of the market, and that should one article not pay another might be successful. But this form of dodging adversity could not be permanent in face of a powerful external and internal competition. Demand might be great, but production would necessarily be much greater, with the result that it would cease to be any longer a source of remuneration for effort. It is obvious that did the land belong to all, it would be of no value to any.

The uncongenial nature of our climate is in itself serious enough to guard against any rash and extensive sub-division of land; but it must be a small matter in comparison to the many other injurious effects such a scheme would create in the harmony of an incomparable commerce such as is our privilege to possess. It must be remembered that we need more than food. We want to sell our mineral and manufactured productions. Allowing that it were possible for the home producer to supply the food requirements of the nation, the equivalent in industrial products would not suffice to make our arts and manufactures paying concerns. Certainly there are our luxuries to be negotiated for in the foreign market, and would give an inducement to export trade. But many of our luxuries are taxed so many times above their value that, necessary as they are, the difference would be sufficient to paralyse our export trade. Other nations would wipe us out of the market. The prosperity of our island home is entirely due to the

capacity of its people for shopping abroad. It is unnecessary to refer to the talent and tact used in this important accomplishment; but it goes without saying that any legislation brought in conflict with this is extremely unwise, and seriously interferes with the wealth of the nation and the welfare of its people.—D. C.

Weather Records and Garden Crops.

The interesting notes by "W. S." on page 29 of the *Journal of Horticulture*, afford an excellent indication of the advantage secured by gardeners who take careful observations of the weather, and who record them in a form convenient for reference. Such records are of value for the workers' guidance, and are occasionally useful as evidence when the demands upon supplies become unreasonable or out of proportion to the opportunities of the season. The delay in the supplies of early vegetables, or the total or partial failure of a crop, may often be traceable to weather influences at a critical period, and when memory only is relied upon it is difficult to fix these matters with certainty; while, if one wished to convince another person, it is still more unsatisfactory. It is sometimes said that with all our weather records we are only wise after the event, and though we may know that a particular frost has destroyed all fruit tree blossom, and checked or injured special vegetable crops, yet the same thing may occur another season as unexpectedly, and we have no means of prevention. This is obviously true as far as it goes. Gardeners and farmers are largely dependent upon favourable weather to enable them to secure the best results, and in an uncertain climate like this the most experienced and skilful practitioners are liable to suffer heavy losses from causes entirely out of their control. Usually, however, a resourceful man has a distinct advantage in being able to judge the probable extent of a present or impending disaster. If one crop is likely to be a failure, the sooner this is recognised the better, so that some provision may be made quickly for further supplies either of the same kind or of a suitable substitute. Amongst vegetables this is more easily managed than with outdoor fruits, for if the latter fail there is nothing to take their places. But even amongst these, valuable lessons can be learnt from the accurate observation of weather effects. In one respect alone it is important, for there is considerable difference in the hardiness of varieties, and when some of these have been proved to escape, or at least to be less damaged than others, the cultivator wisely extends his stock of them, and reduces that of the less reliable.

In another respect a chronicle of the weather variations may prove most useful to the worker, and that is in making some provision against coming evils in the shape of fungoid diseases and insect attacks. It is abundantly proved that alternations of extreme temperatures when trees or plants are commencing growth, and the young foliage is in its most tender condition, are invariably followed by excessive attacks of fungoid pests. The check given to the leaves also renders them more liable to insect attacks. In both cases a thorough and immediate course of spraying will do much to reduce the damage, though it may not avert the danger entirely. There is considerable truth, however, in the old saying, "To be forewarned is to be forearmed," and for that reason weather records may assist gardeners, though they cannot enable them to overcome all their difficulties.

The observations which are of the most importance in a garden are the rainfall, the maximum day temperature, as shown by thermometers in the shade and exposed to the sun, the minimum night temperature 3ft. or 4ft. above the ground and on the ground, and the soil temperature at 6in. to 7in. below the surface. To this should be added the barometer readings, and the direction of the wind. It is the extreme temperatures that we are most concerned with in judging the effects on vegetation, and for all ordinary purposes one observation each day will suffice for a garden record. The prevailing weather should be recorded also, especially with regard to the duration of sunshine and air movements. At the end of each week the results should be summarised, and the actual or probable effects on crops reviewed, while, subsequently, when the evils are fully apparent, reference should be made to the date when the observation was taken.

Many have proved the advantage of taking such records, and have found themselves well repaid for the extra labour and attention required. There are also few employers to whom the matter is represented in the right way who will object to providing the instruments for such a purpose. It is important if the work is undertaken that it be carried out regularly and carefully, otherwise no satisfactory or reliable conclusions can be drawn from the records that would be useful in the direction indicated.—R. LEWIS CASTLE, Ridgmont, Beds.

Fugitive Notes.

In connection with the subject of gardeners' commissions, I find on page 9 a reference by "Monitor" to the practice of a foreign firm in enclosing a slip in their catalogue. Many gardeners will be well aware of the custom of the said firm and

its identity. I cannot accept the statement that vendors in this country are being fathered with the sins of foreign competitors, and at any rate the practice is not of recent introduction, as it has been carried on by the firm in question for some time, and about a year ago the matter was noticed in "The Gardener's Chronicle" unless my memory greatly misleads. There is no doubt corruption, if discovered, will be dealt with, whether it emanates from a Continental or an English house, should the prospective Bill become law.

The interesting note on the Cardiff Castle pot-Vines brought to mind the recollection of many pleasant hours spent in the company of the late Mr. Pettigrew. At one period none knew better than the writer of his success as a grower of many things other than pot Vines. From a gardener's point of view it is extremely regrettable to learn of the probability of the fine gardens being demolished for the planting of bricks and mortar.

In the extremely useful "Notes for Exhibitors" on page 2, "H. D." gives some well-tryed information upon colouring, or "finishing," fruit. With Black Hamburgs I still adhere to the plan, taught me years ago by a very fine fruit grower, of giving air night and day, both by the top and bottom ventilators, immediately colouring commences. There can be no doubt that some growers have a tendency to withhold water at this stage, with the idea that by so doing they are hastening the ripening process. No greater fallacy could exist, for the roots of Vines are at this period most probably in a most active state. Scarcely anyone will quarrel with "H. D." in connection with his remarks on the colouring of light-coloured Grapes. There is, however, some risk attached to tying back the leaves above Muscats unless the cultivator is prepared to shade the bunches during the warmest hours of the day during extra bright hot spells.

The report of the dinner of the Gardeners' Royal Benevolent Institution tempts me to make another appeal on behalf of this splendid helper. One glance at the yearly disbursements should convince anyone of the good that is being done amongst old and indigent fellow-craftsmen. There ought at least to be a thousand gardener subscribers to the funds; if this number could be reached there would be fewer deserving applicants sent empty away than there now are each succeeding year.—PROVINCIAL.

The "Daffodil King" on Tour.—No. 6.

(Continued from page 6.)

Our last notes were in the nature of a valedictory to North America, for Mr. Barr sailed from the Californian coast on March 24, 1899, en route for "the land of the rising sun," and spent one day at Honolulu, one on the Sandwich group of islands, lying less than half way between California and the Japanese empire. The chief attraction here, to one of horticultural propensity, are the choice tropical fruits. There the Cocconut trees may be seen growing along by the wayside, though not in fruit in March. The museum in the chief town here stands next to the museum, Auckland, New Zealand, for its collection of South Sea Islands relics. Mr. Barr was informed by the curator that until a few years ago the natives could supply names for every plant on Honolulu; now there is scarcely one that they can give the name of. Rice fields are, of course, a prominent feature. Honolulu is a calling station, or half-way house, for ships on the way to Japan, and is a central one in the Sandwich group.

Japan.

Arriving at Japan, the voyager presented himself at the Club Hotel, Yokohama, being the one most frequented by the British and Colonials. The Americans go to the Grand Hotel, which is a large and finer building, and, of course, more expensive; but the best hotel of all, and, perhaps, the least frequented, is the Oriental, the menu being exceptionally good, largely from the fact that a French chef "rules the roost." Mr. Barr visited the principal nurseries of Japan, and one worked by Mr. Unger may be called the European nursery of Japan, combining, however, the finest of the Japanese cultures. This nursery does a large business in distributing trees and shrubs throughout the East.

The Yokohama Nursery Co. close by had an immense stock of dwarfed shrubs and Japanese plants, of every size and all ages, one dwarfed tree being estimated to be 500 years old. The managing director's son stated that they were prepared to give the history of this tree back 400 years to any purchaser.

These two nurseries are the principal exporters of Lilies to Europe and America. Looking over their stocks of *L. longiflorum*, Mr. Barr drew attention to the necessity of discarding many of the varieties, and working up stocks of the true *eximium* type. And while there (as the bulb can be distinguished from the others) some 80,000 were put out for cultivation as a start, so

that within a few years the finest forms only will be offered. Of the Bermuda form of *L. longiflorum*, the supply was not equal to the demand, hence Japan was called upon to supply the deficiency, and every variety was sent. As the Lily does not grow on the mainland, collectors are sent to the different islands to gather the bulbs, and did so without discrimination. There are something like eight distinct forms, which accounts for the early importations sometimes consisting of tall, dwarf, long-funnelled, short-funnelled, or split-flowered kinds. The split flower is a fixed form; not an accidental thing. *Lilium longiflorum* multiplies with great rapidity, so that in five years which have lapsed most of the inferior sorts will have been discarded.

The great interest to the ordinary traveller in Japan are the temples, some of them of great magnificence, and all of great antiquity. It would not be worth while to fill our pages with descriptions of these, for this can be obtained in the guide books; but it may, however, be of advantage to visitors in Japan to know of, and read, Mitford's "Old Japan," and Henry Norman's "Real Japan." Having read these, says Mr. Barr, all other works on Japan are generally of second importance.

One must not forget that besides the Lilies, Japan is famous for its Iris *Kämpferi* (*lævigata*). Mr. Barr is at present in correspondence with Japan to see whether the varieties can be traced back to their start from the original *I. Kämpferi*, a flower 2in. to 3in. across, and generally of a purple colour. There are albino varieties, but the traveller was not fortunate in seeing any of them, and these have been ennobled to flowers measuring up to 15in. diameter, in all grades of "doubleing," from semi to fully double. And the improvement in these respects is being sedulously followed up by several growers. The best collection was discovered a few miles out from Tokio. The aged proprietor was a keen florist, and had his plants in fine condition, but he belonged to the old school of Japs, who had been early trained that it was dangerous for a working man to appear to possess property, hence he never got beyond the dress of an ordinary labourer, although considered to be wealthy in land and stock. The old gentleman, however, has passed to the majority since Mr. Barr visited him and his garden.

Having discussed various questions not cognate to our pages, Mr. Barr made a reference to the Japanese and their penchant for unripe fruit. The Peaches you will hear them crunching as a boy might eat a crisp Apple. Plums they pickle and use as a relish before meals, and twice Mr. Barr essayed to try these "relishes," but twice he had to reject them.

The suburbs of Tokio are full of little nurseries, which have various specialities, including the "manufactory" of dwarf trees, most of which find their way into the two nurseries already named, in Yokohama, these being the principal outlet. Flowering Plums and Cherries, however, are grown for domestic sale.

Japan cannot be called rich, and our narrator observed that the cowkeepers around Yokohama sent out their womenfolk to collect suitable grasses for the cows, as that of the districts was of an unsatisfactory character. All the butcher meat has to be brought from the opposite or west side of the country, viz., Kobe.

The veteran traveller reached the northern island (Yezo), and mentioned that in Sophoro, the capital, the palace that had been built for the Emperor was now a hotel. The botanical professor in this city most favourably impressed Mr. Barr, the former having studied three years at Harvard University, and did some original work during that period.

Nakasaki is a very ancient town, and is one of the ports of call for steamers on their way to China. While here, the visitor was most hospitably received by the priests in charge of one of the temples, and he was fortunate to secure a selection of Japanese drawings in book form, together with a few bronzes. In the northern island, Mr. Barr found *Pæonia obovata*.

China and the Philippine Islands.

Sailing now from Nakasaki, he next reached Shanghai, in China, called also "the model settlement of the East." Its suburbs have a decidedly English aspect, mainly through the residences of Europeans lying back from the roads, and entered by carriage drives. The native town follows generally the typical Chinese plan. Still passing southwards, Hong Kong next claimed attention, and here some days were spent, particular attention being given to the botanical garden, which is directed by Mr. Chas. Ford, F.L.S., and Mr. W. J. Tutcher is curator. Mr. Ford possesses a considerable knowledge of things Chinese, and was busy at Mr. Barr's visit, surveying the newly ceded territory given to Great Britain.

Manila lies directly in the route of any passenger to the north of Queensland, and when the *persona* of this tour left Hong Kong, his next call was at this renowned chief town of the Philippine Islands. It was then full of America's citizen-soldiers, to one of whom he spoke, and discovered that the soldier had once been in the forces of Her Britannic Majesty. Manila is an old Spanish town with nothing specially remarkable about it, except that from here the Manila hemp is shipped; so the sojourn was soon terminated, and touching next at Port Darwin, he set foot on the great Australian Continent, and his future wanderings thereon we shall take occasion to notice.

Liverpool Parks Inspection.

One of those interesting and pleasant functions in connection with the Parks and Gardens Committee, viz., the inspection of the public parks and recreation grounds, was held on the 30th ult., when the Lord Mayor (W. W. Rutherford, Esq., M.P.), accompanied by Alderman Grindley, Roberts, Ball, Ellison, Dr. Clarke; Councillors Grant, Pickthall, Light, E. L. Lloyd, J. H. Farmer, J. Glover, T. May Smith; town clerk, M. E. R. Pickmere; Mr. H. Herbert (chief superintendent of parks), Mr. J. Guttridge (curator Wavertree Botanical Gardens), and Mr. G. W. Coltman (surveyor's department), made a start from the Prince's Boulevard, with its splendid avenues of trees, to Sefton Park. Proceeding by the vicinity of Lark Lane, the site for two new bowling greens was inspected, and in such a populous district will be most acceptable. On through the beautifully wooded park, which now is perfect to a degree, the magnificent Palm house was visited, Mr. Herbert having it just a blaze of floral beauty, intermingled with stately foliage and creeping plants. The committee noted with satisfaction the completion of the handsome statues presented by Mr. Yates Thompson. From thence to the newly incorporated Garston, where, amidst evident signs of increasing prosperity, the committee have wisely set apart thirty-five acres in the most central part, and are losing no time in beautifying it, a fine bandstand and bowling greens being rapidly constructed.

There was a short halt at the Wavertree Recreation Ground, the party then making for the Wavertree Botanical Gardens, which is one of the sights in the centre of the city. The exhibition house is a picture of high class culture, graceful Fuchsias occupying the centre stage, and brilliant Gloxinias and double and single Begonias the side stages. Many huge Palms are flowering, whilst the many species of botanical and medicinal plants are in the rudest health. Outside the beds are all planted; the carpet bedding, which a few years ago would not have been dreamt of, flourishes under Mr. Guttridge's sound culture.

Newsham Park was the next call. There the huge stretches of bedding out were fully admired, as was the new aviary recently presented by Councillor J. R. Grant, and which has taken a firm hold on the public. In Stanley Park two fine bowling greens are just completed, and will afford intense delight to the huge population close at hand. Kirkdale Recreation Ground, a large tract of land recently secured, is assuming definite proportions, and is already very popular. A flying visit was paid to other open spaces, all of which betokened the highest state of efficiency on the part of Mr. Herbert, the courteous superintendent and his staff. At the luncheon the speeches were hopeful to a degree, and signs were not wanting of the determination of the committee to keep Liverpool to the forefront in this great work to benefit its busy toilers. In concluding, I may mention that ten years ago there were twenty-two open spaces, whereas now there are fifty-three, with an aggregate of 850 acres; also that the window boxes chiefly given to the poor would (if placed end to end) cover considerably over a mile in length.—R. P. R.

Brown Rot of Fruit.

(*SCLEROTINIA FRUCTIGENA*, Schröter.)

This is undoubtedly one of the most general, and also the most destructive of diseases against which the fruit grower has to contend. It attacks Apples, Pears, Plums, Cherries, Peaches, and is also not uncommon on various wild fruits belonging to the order Rosaceæ, as Bullace, Crab, &c.

To the ordinary observer this disease first attracts attention when it appears on the fruit under the form of brownish scattered patches on the skin. This is followed by the growth of dull grey tufts (the so-called *Monilia* fungus), which are usually arranged in irregular concentric rings. These grey tufts are composed of dense masses of spores arranged in long branched chains. The fairy-ring arrangement of the fungus is most evident on Apples and Pears; on Plums, Cherries, and stone fruit generally the grey tufts are irregularly scattered over the surface. Although most obvious on the fruit, the fungus usually first attacks the leaves, where it forms thin, velvety, olive-green patches. The spores from diseased leaves are washed by rain, or carried by insects, on to the surface of the young fruit, or not infrequently the flowers are also inoculated from spores derived from young leaves; and in many instances where brown and shrivelled blossoms are attributed to the action of a late frost, the true cause is in reality due to the *Monilia* fungus.

In those instances where the disease has been allowed to follow its course undisturbed for some years, the young shoots of the trees are also attacked and killed during the first or second year. The fungus develops rapidly on such dead twigs, and furnishes a ready supply of spores, which are mature during



Explanation of the Figures.

1. A diseased shoot with the persistent blossom of the previous year; cut from the tree in February. Both twig and flower-stalks bear tufts of the fungus. Nat. size.
2. Cherry leaf attacked by the fungus. Nat. size.
3. An Apple recently attacked, and showing the fungus growing in concentric rings. Nat. size.
4. Fresh Cherry blossom attacked by the fungus. Nat. size.

April and May, just when the young leaves and blossom are most susceptible, and wholesale infection results.

Fruit attacked by this disease does not rot and decay, but becomes dry and mummified. Such fruit often remains hanging on the tree until the following season. Whether it does so or falls to the ground, it is practically unchanged until the following spring, when its entire surface becomes covered with a copious crop of spores, which are dispersed by various agencies, and the disease repeats itself.

It has long been suspected that the *Monilia* represented but one stage in the life-cycle of the fungus; this supposition has proved to be correct, the second or ascigerous form of fruit having been found growing abundantly on old half-buried Peaches in several orchards in different parts of the United States, where the fungus proves quite as destructive as with us.

PREVENTIVE MEASURES.

All dead twigs and shrivelled fruit, whether hanging on the tree or lying on the ground, should be collected and burned during the winter.

After the diseased fruit and dead branches have been removed, the trees and also the ground should be thoroughly drenched with a solution of sulphate of iron, prepared as follows:

Sulphate of iron	25 pounds.
Sulphuric acid	1 pint.
Water	50 gallons.

Pour the sulphuric acid upon the sulphate of iron, then add the fifty gallons of water by degrees. A barrel is the best vessel to use; a metal vessel must not be used, as it would be acted upon by the sulphuric acid. Spraying with the above solution should be done in January or February, before the leaf-buds begin to swell in the least, otherwise the foliage and blossom will be destroyed. When the leaf-buds are expanding, and at intervals as required, the trees should be sprayed with quite weak Bordeaux mixture. The above line of treatment must be followed for at least two seasons.

Copies of the above in leaflet form may be obtained free of charge and post free on application to the Secretary, Board of Agriculture, 4, Whitehall Place, London, S.W. Letters of application so addressed need not be stamped.

NOTES & NOTICES

Richmond Show—Correction.

Messrs. B. R. Cant and Sons, of the Old Rose Gardens, Colchester, draw attention to the fact that they were the winners of the twenty-five guinea cup for Roses at Richmond Show, which honour our contributor recorded in favour of another firm.

Appointment.

Mr. Joseph Mottram, for the past fourteen years head gardener to Mrs. Boden, Beach Mount, Bowdon, Cheshire, has been appointed head gardener to Abel Buckley, Esq., Ryecroft Hall, Audenshaw, near Manchester. Mr. Mottram takes charge of Ryecroft Hall Gardens on Saturday, July 25.

Royal Horticultural Society.

The next meeting of the Royal Horticultural Society will be held at the Drill Hall, Buckingham Gate, Westminster, on Tuesday, July 21, from 1 to 6 p.m. In connection with this meeting the National Carnation and Picotee Society will hold its annual show. Instead of the subject previously announced, the lecture will be on "Horticulture in and the Flora of New Zealand," by G. Hunt, Esq.

A Notable Achievement.

In perusing the numerous show reports, it may have escaped the notice of our readers that there is one firm which this season has won three gold medals within a month. That firm is Messrs. Dicksons, of Chester, to whom was awarded a gold medal at each of the following shows, viz.: the York Gala, the Hanley Fête on the 1st and 2nd inst., and the Wolverhampton Fête upon the 7th, 8th, and 9th of this month.

Lincolnshire Bulbs for Holland.

Dutch bulb buyers have been making extensive purchases of bulbs in the Spalding district, and these will shortly be consigned to Holland by water, being loaded up on the river Welland at Spalding. Dutch bulbs have suffered severely through the frost, and hence the purchase of Lincolnshire bulbs to take their place. It is a curious fact that the particular district where the bulbs have been purchased is known as Holland Division of Lincolnshire.

Arrangement of Rhododendrons.

The picture on page 61 illustrates an effective arrangement of Azaleas and Rhododendrons, for Azaleas will always be regarded by gardeners as distinct from Rhododendrons. Both Azaleas and Rhododendrons are wonderfully accommodating in soils other than calcareous ones, and they succeed in all moderately open positions. They are seen to advantage in large masses and groups near each other or in continuous borders. Sloping dells and banks show them off to advantage, and Lilies, Foxgloves, and Mulleins sometimes form a good complement with the shrubs. For the sake of their beautiful autumn foliage the Azaleas should be liberally planted.

City Horticulture at Edinburgh.

Mr. J. W. M'Hattie, City Gardener, delivered an address on "The Cultivation of Window Plants" on July 10 at the loan exhibition of flowers which is being held at 90, Fountainbridge, Edinburgh, to a large audience. Mr. M'Hattie pointed out that only those who had a love of flowers in their hearts could be expected to give them all those little attentions, tender and constant, that went so far to make up the sum of success in plant culture. To carefully tend a plant for the space of two or three months for the sake of winning a prize was a low and sordid motive. That exhibition was intended to waken and keep alive within the people of that district a true, gentle, and lasting love for flowers that would lead them to take the flowers to their hearts. Mr. J. M. Hogge, in moving a vote of thanks to Mr. M'Hattie, suggested that Corporation should, as was done in Glasgow, supply window boxes to the people in the poorer parts of the city.

Manchester Botanic Gardens.

We learn that the Stretford Urban Council have acquired, or will acquire, these gardens, in order to preserve them to the Manchester public.

Croydon Gardeners' Society.

An excellent syllabus of meetings up to December 15 has been arranged, and copies are in the hands of Mr. Harry Boshier, 62, High Street, Croydon, who is secretary.

The Codlin Moth.

We are informed that Mr. W. Horne, of the firm of Horne and Sons, Cliffe, has found a remedy for stopping the ravages of the codlin moth, and proposes making it known to the public by reading a paper on the subject at the September meeting of the National Fruit Growers' Federation.

£25 for the Gardeners' Orphan Fund.

Mr. Abraham Follett Osler, F.R.S., of South Bank, Edgbaston, who lately died, left £25 to the Royal Gardeners' Orphan Fund, and £25 to the Birmingham Gardeners' Mutual Improvement Society. Mr. Osler also some few years ago presented the Birmingham Gardeners' Mutual Improvement Society with twelve new volumes of "Sowerby's British Botany."

United Horticultural Benefit and Provident Society.

The usual monthly committee meeting of this society was held at the Caledonian Hotel, Adelphi Terrace, Strand, on Monday evening last, Mr. Thomas Winter in the chair. Four new members were elected, making sixty-one this year, the total membership now being 1,026. Five members were reported on the sick fund. The sick list has been unusually heavy during the last half year.

American Friends in England.

A large number of American visitors are at present in London, and among them not a few who are well known to botany and horticulture. We have seen Professor Sargent, Professor Waugh, and Mr. R. Vincent, jun., the latter being the largest vegetable and plant grower in the United States. He is, moreover, a Rugby (Eng.) man. In such an extensive country as the U.S. there are always failures of certain crops somewhere, and it is the purpose of Messrs. Vincent and Sons to be able to supply vegetable stocks whenever called upon.

Edinburgh Seed Trade.

On the evening of Wednesday, the 8th inst., a most interesting ceremony took place in the Royal British Hotel, when a representative gathering of gentlemen connected with the seed, flower, and market garden trades was held in honour of Mr. Alexander Sclater, the well-known seed manager to Messrs. Thomas Methven and Sons, on the occasion of his silver wedding. The gathering was presided over by the gentle and genial Mr. Henry Erskine in a manner so pleasant that everybody felt the meeting a most enjoyable one. The members of the Edinburgh seed trade are the keenest of keen business men, but when they lay aside the tomahawk and fraternise, they are full of brotherly affection—the sharpest opponents being the first to recognise the good qualities of a brother in trade. As mouthpiece of the meeting, Mr. William Newton, fruit salesman, presented Mr. Sclater, in the name of many friends present and absent, with a solid silver tea and coffee service, and in felicitous terms eulogised Mr. Sclater's many outstanding virtues—his energy in business, his urbanity, his probity, and above all his willingness at all times to assist younger and less experienced brethren from his great store of knowledge. No one was better known in Edinburgh markets than Mr. Sclater, and it was universally felt that the longer and better he was known the more he was esteemed. Mr. Sclater replied in a terse and interesting speech, thanking his friends for their great and unlooked-for kindness, and giving many interesting reminiscences of the Edinburgh seed trade during the more than thirty years he had been connected with it. To mix among the market gardeners and gardeners of the East of Scotland for that long period, and to find that he had not only no enemies, but troops of friends, was a matter of which he was very proud, and in his own name, and that of his partner in life, he was deeply grateful for the very bounteous expression of their goodwill and good wishes. A very pleasant evening of song and sentiment was spent.

French Black Currants.

A record cargo of French Black Currants, consisting of 11,700 packages, has arrived at Hull. The fruit was of excellent quality, and made good prices, some buyers taking as much as fifty tons.

Pioneer of the Scottish Fruit Trade Dead.

An old and prominent merchant in Edinburgh has been removed by the death of Mr. James Lindsay, of Drydenbank, Loanhead, the head of the firm of James Lindsay and Son, Ltd., fruit salesmen, Edinburgh and Glasgow. Born in Dundee on May 17, 1815, a month before the battle of Waterloo, he had thus entered his eighty-ninth year. Mr. Lindsay was the first wholesale fruit merchant to make a start with that now extensive trade in Scotland.

Fruit Crop in North-west Fife.

The much-longed-for rains which have fallen have had a very beneficial effect upon the fruit crops in the north-western district of Fife. Strawberries have recovered their stunted growth, caused by the prolonged drought, and the early crop will be a fair one. Picking is general. In some districts the fruit was selling at from 10d. to 1s. 1d. per pint. Gooseberries are showing best on young plants, and owing to the failure of the English and some of the Scottish fruit crops, are commanding good prices, 2d. per lb.; and 1½d. per lb for wholesale quantities of green berries. Raspberries show only an average return, and Currants, with the exception of the Black, are abundant.

The Fruit Supply.

The general shortage in English-grown fruit this year, says the "Daily Express," has been compensated by some remarkable increases in imported fruit. The public, therefore, is scarcely feeling the losses which have caused depression among fruit-farmers. The following table shows the increases in the consignments of some of the most popular fruits:—

Fruits.	Increase during June, 1903.	Increase during half-year.
Bananas	118,152 bunches	250,535 bunches
Apples	5,376 cwts	564,887 cwts
Currants	2,438 cwts	2,438 cwts
Gooseberries	3,435 cwts	3,846 cwts
Pears	550 cwts	6,391 cwts
Strawberries	3,673 cwts	3,695 cwts

One of the poorest crops this year is that of Black Currants. Frosts, rainstorms, bitter winds, and jumping temperatures are greatly to blame, but the devastations of the mite have been serious in most plantations. It is, therefore, not surprising that the fruit is being sold at Covent Garden at 1s. a lb. Bad reports come from all orchards, even from the best and most sheltered orchards of the West of England. Cherries, Pears, and Plums have suffered the greatest destruction. A decrease of 16,175 cwts. in imported Cherries during the period ended June 30 shows that Continental growers have also suffered misfortune. Cherries are likely to remain dear throughout the season, as nearly the whole of the Kent crops are a failure.

The Apple Crop.

A correspondent writes to "The Maidstone Gazette" as follows:—"Time is now sufficiently advanced for the crop to be fairly estimated. A light one, limited to a few sorts, is all that has been expected for some time, but the situation every day becomes worse throughout the land, so much so that I believe we shall have one of the smallest crops on record. In fact, the crop can be called nothing short of an utter failure. Orchard after orchard may be found with scarcely enough fruit to pay for picking, and what few Apples are left have yet serious attacks of vermin to face. The chief cause of the present state of things was probably the severe late frosts, but I do not think this can hardly account for the whole. Certain sorts are very conspicuous as having pulled through, chiefly the Worcester Pearmain, the old-fashioned King Pippin, Cox's Orange, and the Blenheim Orange. On the other hand, some sorts, go where you will, will yield practically nothing, the Wellington being conspicuous in this way. Our forefathers grew Apples anyhow, but it is certain now we must devote a considerable amount of attention to them, or they will be a thing of the past—I mean as to protection from vermin and the like. But the reverse should be, for we are living in the day when some grand new plantations are coming in, and the Apple crop of Kent should be very much in advance of anything grown in former years."

Register of Nurseries, &c.

We have again received Messrs. Protheroe and Morris's quarterly register of nurseries, market gardens, farms, florists' seed businesses, and partnerships, to be let or sold. Application for this register should be made to the firm at 67, Cheapside, London.

Pea Pickers.

Down in Kent, in the district which may be sufficiently well described as lying between Sandwich, Canterbury, and Dover, green Pea picking is in full swing (writes a correspondent). Many acres of the best sorts are now grown for the local preserving factories, which have a large and increasing output, and afford work to many in the process of canning and bottling. Those who do the actual picking in the fields appear regularly, year by year, no one can tell you from whence, and after the last field is finished they vanish for another year. A motley lot of humanity they appear as they toil along the dusty highways on their journeys from one scene of labour to the next. Some possess ponies and carts, on which their household effects are piled high, the top of the load being generally occupied by swarms of bareheaded children; but the majority trundle their sorry equipment along on shaky perambulators or go-carts made of sugar-boxes mounted on wheels. Picking begins soon after day-break, and continues, with a short rest at noon, until evening, and then the pickers, men, women, and children, begin to prepare for supper, and put up rough shelters made by hurdles covered over with the Pea straw, although many carry light poles, both ends being stuck in the ground, and canvas laid over them. Next ensues a procession to the nearest town or village in search of supplies. Your true-bred picker does not believe in stinting himself to-day in order to provide for the morrow. The village greaser does a fine trade, the baker quickly sells out his stock, and truth compels me to admit that the alehouse is not neglected. As the long July evening passes into the twilight of the summer night, the camp fires glow red, and the pleasant and pungent odour of burning wood fills the air. The youngsters, merry as crickets, despite their rags, indulge in merry games, until presently, tired out with their long day in the hot sun, they creep into their various apologies for beds, and silence gradually falls upon the pea-pickers' camp.—"Pall Mall Gazette."

Fruit in Herefordshire.

All the farm crops in Herefordshire and adjoining counties are backward by quite a fortnight, having been checked by cold winds and frosts in May and June, but, excepting orchard fruit, which is the worst failure during twenty years, they promise a fairly satisfactory yield. Last year's orchard fruit crop was bad enough, says "The Hereford Times," spoiled as it was by a plague of weevils, midges, and other insect pests. This year, it seemed in May as if both pot and vintage fruit had gone entirely. The cause is attributed by some people entirely to the extraordinary frosts of May, which killed the blossoms, but we should also remember that after the trees were cut so badly by blight twelve months ago they made a second growth rather freely, which tended to check the wood from ripening and producing fruit this time. As a consequence, the blossoms did not open this spring so freely as they should have done, and thus they proved an easier victim to the frost. Mr. John Watkins, of Pomona Farm, Withington, was showing some fruit growers the other day, two branches from a Cherry tree, still bearing the withered blossoms, and two or three feet length of the wood itself killed by the frost. The whole of his Cherry plantation had suffered in like manner. Early Apples, Pears, Plums, Cherries, and other tree fruit all suffered, the frost destroying the pollen, so that the fruit never set. Terrific hailstorms in some parts of the county completed the work of destruction which had been effected already to a great extent by the frost and blight. It is only on cultivated ground that there is any pot fruit left. Most of the early sorts of pot and cider fruit have vanished along with the Plums. Late cider varieties are just making an appearance, but they are only in a few places anything like a crop. The best sprinkling of Apples is at Tillington Nurseries, which lie in a sheltered position. Cherries are practically a failure, and the blackbirds are making fierce attacks on those that are left. Many Plum trees that have been washed are "blowing" again, and may produce a second and better crop. The Damson trees are pitiful to look at, showing practically no fruit and being covered with aphids. Nuts are scarce. Strawberries are not a big crop.



Seasonable Notes.

The final potting is in many cases not carried out until well into the present month, but good, if not the best results, often follow late potting. Where there are large numbers of plants it is often difficult to get them all potted as early as desirable. A good stock of compost should be kept in readiness, so that every favourable opportunity may be taken advantage of to pot a few plants. The best mixture is composed of four parts loam of a turfy character, one part leaf soil, one of sweetened horse droppings, half a part of old mortar broken up finely, together with some coarse sand and wood ashes and a 6in potful of bonemeal intermixed with each bushel of compost. Turn the whole over several times, and ensure it being in a properly moist condition for potting. Do not allow it to lie to the drying influence of the air in hot weather, but cover with mats. The pots may be prepared in readiness at odd times, crocking them moderately, covering the drainage with damp moss, flaky manure, or rough parts of the potting material.

It is essential that the plants be thoroughly moist when turned out of their pots for placing in larger. With late potting the roots will be found to be very much matted round the sides of pots. These must be loosened a little, and the crocks at the base removed; 8in or 9in pots are the most suitable size to place single plants in. Fill in some of the compost, which press down firmly, then arrange the plant so that the ball is well below the surface, and work in material firmly round, finishing by just covering the ball and leaving some space for top-dressing later on. If turned out from pots larger than 5in, correspondingly larger pots must be used for the final potting.

Stake the plants immediately, those with tall stems requiring support. Water need not be immediately supplied to the roots, but a light syringing may be given daily, and a copious watering as soon as the moisture in the soil appears to be lessening. In very dry weather this will require to be done in a few days. In damp weather perhaps not for a week. Stand the plants in an open position on boards, or on an ash bed.

The top of the sticks supporting single stemmed plants should be secured to a horizontal wire stretched between upright stakes. As the plants grow tie in the main stem to the sticks and rub out all side growths. With proper attention to syringing and watering the growths should be free of insects. Watering is, of course, an important operation, and on its proper carrying out depends to a great extent the health of the plants. Water must be given, when it is required, in quantity sufficient to pass through the whole mass of soil and roots. Then wait until the same conditions prevail again. This may happen twice daily in very hot weather, or several days may elapse. Much depends on the vigour of the variety, and the quickness with which the pot is filled with roots. Clear, soft water should be the only stimulant applied until there are plenty of roots, and the buds appear.

Syringing the plants at intervals is beneficial, especially after hot days and in dusty weather. It will freshen up the growth well, but the ordinary watering should be done first.

Plants that may have been potted early and have since made abundant growth, in some cases becoming very much root-bound, and needing some further support, may have it by applying weak liquid manure or soot water once or twice weekly. A top-dressing, too, may be applied, this consisting of loam mixed with a little bonemeal and rotted cow manure. This will largely invigorate the plants and induce the production of fibrous rootlets.

Should insects appear at the points of shoots dust with tobacco powder. Remove weeds from soil, and any dead leaves which may be on the plants. It is always desirable to water the plants with water that has become warmed by the sun, exposure to the air also helping to render it soft. Hard water may, however, be materially softened by dissolving washing soda in it, half a pound being sufficient to soften 80gals of water. It is necessary to dissolve the soda in boiling water first, then mix it in the water, allowing it a day to settle before using. There is also a preparation called anti-calcaire, which is very useful to soften hard chalky water. It is a good plan to catch all the soft water possible in casks and tanks for use in Chrysanthemum culture.—E. D. S.

Cardiff Gardeners' Outing to "The Hendre."

Mr. John Julian, as secretary of the Cardiff Gardeners' Society, has just sent us the programme for the annual summer outing, which will take place on Monday, August 10, to Lord Llangattock's beautiful gardens. The party will leave at 9.20 in the morning, and start on the return journey at 8.45 p.m.

Societies.

R.H.S., Scientific Committee, July 7th.

Present: Dr. M. C. Cooke (in the chair); Messrs. Holmes, Gordon, Massee, and Saunders, Prof. Boulger, Revs. W. Wilks and G. Henslow (hon. sec.).

Apple trees and insects.—Mr. Saunders reports as follows upon specimens received from Mr. Campbell, of Airdross, Leeds: "The Apple trees are attacked by the caterpillars of two different moths, but the habits of both kinds are very similar. The green caterpillars are those of the winter moth (*Cheimatobia brumata*), the brown and yellow ones of the great winter moth (*Hybernia defoliaria*); both belong to the family Geometridæ, and are two of the most destructive pests to Apple trees. The females of both kinds are wingless, or have only the rudiments of wings, so that they are incapable of flight. As the ehrysalides are formed in the ground when the moths emerge, it is evident that they must climb up the trees if they wish to lay their eggs, as is their custom, near the buds. To prevent this is one of the most important things, if it is desired to protect the trees from attacks by the caterpillars. The simplest way of effecting this is to fasten greasy bands round the stems, which the caterpillars are unable to cross. As this might injure the tree if the grease came in contact with it, a strip of grease-proof paper, 7 or 8in wide, and long enough to overlap an inch or more, should be tied round the trees, say 3ft from the ground, and fastened top and bottom with bast matting or soft string that will not cut the paper. Over this should be tied a strip of calico about the same width, also tied top and bottom; this must be well smeared with cart-grease, softsoap, and train-oil mixed, so that a soft, sticky compound is formed in which the moths will be caught. These bands should be put into position as early as the middle of October, and kept in working order until well after Christmas. To do this the bands should be re-greased every now and then, or whenever it is found that the grease is losing its stickiness, or, as is sometimes the case, clogged up with the number of moths caught in it. Notwithstanding these precautions, some of the females may find their way into the young shoots. Some are no doubt carried by the males (who fly well) when coupled, so that it is useful, when it can be carried out, to spray the trees before the buds show any signs of opening with a caustic alkali wash, made by dissolving 1lb of caustic soda in half a bucket of water, add $\frac{3}{4}$ lb of pearlash, and stir until all is dissolved, then add enough soft water to make 10 gallons, and finally stir in 10oz of softsoap which has been melted in a little hot water. This mixture is very caustic, and must not be allowed to touch the skin or clothes, and if it does it should be wiped off as soon as possible. A still day should be chosen, so that the wind will not blow it on to the operators; this spraying should kill the eggs if any are laid on the tree. To destroy the caterpillars the trees should be sprayed as soon as the fruit has set with paraffin emulsion, or $\frac{1}{4}$ lb of Paris green and $\frac{1}{2}$ lb of lime mixed in 50 gallons of water. This mixture must be kept well stirred, as the Paris green is very heavy and soon sinks to the bottom, and in this case some of the mixture will be too weak to kill the caterpillars, and the rest so strong that the foliage will be injured."

Lilac shoots and frost.—Mr. Massee showed a curious and important effect of frost on the leaves of the Lilac. The apex was frost-bitten, then, after a thaw, the leaf became attacked by *Botrytis cinerea*, which travelled down the region of the midrib and petiole, till it attacked the terminal bud between the leaves. As thousands of flower buds were thus destroyed in consequence of the late frost, such represented great pecuniary loss to the growers for the flower markets.

Diss, July 7th.

A strong and gusty northerly gale raged over the eastern counties on Tuesday, the day before this little show; in not a few cases the flower heads were actually blown off, and no doubt many maidens were blown out. Still, the morning was very cool and rather dull, setting up was a pleasure, and Roses looked and stood well.

In the open class for thirty-six, Rev. A. Foster-Melliar was pretty easily first with good Ulrich Brunner and Golden Gate, a small but nice Mildred Grant, and Mrs. Robert Garrett, a H.T. that comes balled in cool weather, but under the influence of the last few hot days has shown fine exhibition qualities, and is at all times a capital grower. Frank Cant was second with a somewhat poor lot, Mildred Grant, Ulster, and Innocente Pirola being his best. Rev. J. R. Fellowes was third. For the Frere challenge cup (amateurs, twenty-four), Mr. Foster-Melliar was easily first with a fine and substantial stand. The following were especially good: Mildred Grant (best H.P. or H.T.), Lady Moyra Beauclerc, Ulrich Brunner, Mamie, and Maman Cochet (best T. or N.). Mr. Fellowes was second with Madame Cusin, a small Frau Karl Druschki, and Anna Olivier as his best. Rev. H. A. Berners was third.

In the class for twelve Teas (open), Mr. Foster-Melliar was again pretty easily first, with large blooms, of which Cleopatra, Maman Cochet, White Maman Cochet, and Muriel Grahame were perhaps the best. Mr. Berners was second, having fair blooms of

Madame Cusin, Jean Ducher, and White Maman Cochet. Frank Cant was third, having Mrs. Mawley and Sylph as fair flowers.

The local classes, which would be only of local interest, were fairly filled. Nowhere else but at Diss do I find that excellent arrangement of staging, suggested, I believe, by Rev. Page Roberts, which consists in a sort of gangway formed by a couple of planks running down the centre of the staging table, and lifted 4in or 5in above it. All the Rose boxes, when finally staged have their backs just resting on these planks, a plan which has the following advantages: the boxes are all set up at the same angle, which is a great convenience to the judges; exhibitors do not need to bother with blocks or flower pots, &c.; and spectators do not brush against the blooms or find themselves pushed against them too close for a good view.—W. R. RAILLEM.

Wolverhampton Gala, July 7th, 8th, and 9th.

Owing to the effects of the high wind which prevailed all day on the 6th, fears were entertained that the show would have to be postponed on the following day, as one or two of the large tents completely collapsed. The judging was delayed, and the groups of plants were not in readiness till late in the afternoon. Nevertheless, there was an immense attendance of visitors. We must acknowledge here the capabilities and exertions of the energetic and courteous secretary, Mr. W. E. Barnett, and his colleagues in having so efficiently rehabilitated the damaged structures.

This was one of the best shows yet held by the society, a leading feature being the vast array of hardy flowers. Rivalling the foregoing was the show of Roses, which was of a most gratifying character. There was a more than usually numerous complement of forced fruits, all of high quality, excepting the unripeness of the Muscat of Alexandria Grapes. Another attractive feature was Orchid groups, the best, on the whole, yet seen here, and which attracted a continuous crowd of visitors. There were two collections staged, each in a space 12ft by 5ft, and the premier winners, Messrs. J. Cypher and Sons, Cheltenham, were closely contested by Mr. J. Robson, of Altrincham. Mention must also be made of the hand bouquets, baskets, and wild flowers by amateurs and cottagers, ladies and children.

Plants: Open Classes.

For the group of plants arranged for effect there were but three contestants, and, as formerly, Messrs. James Cypher and Sons, of Cheltenham, were the recipients of first honours, with a departure materially different to the cork-bark bridges, temples, &c., that of recent years characterised their groups. Instead, they simply erected a pyramidal shaped centrepiece of plants, surmounted by a large and massive Palm, in a space not to exceed three hundred and fifty square feet. In the estimation of many, it afforded a pleasing and welcome change. The second prize was awarded to a new comer, Messrs. Artindale, of Sheffield, who proved to be a worthy contestant; and the third position was credited to Mr. J. Vause, Leamington.

Considerable interest was taken in the new class for groups, namely: (1) A display of plants or floral arrangements, or both combined; (2) fruit or vegetables, or both permitted, staged in a space not to exceed two hundred square feet. First prize, a silver cup, value £5 5s., and cash £20; second prize, £10; third, £5. It brought forth three contestants, and their exhibits each occupied 40ft by 5ft of tabling. The judges were evidently considerably exercised in coming to a decision, but eventually awarded the coveted blue-ribbon to Mr. J. E. Knight, nurseryman, Wolverhampton, with an effective combination of masses of Lilv of the Valley in pots as one of the principal features, also with a Lilium Harrisii and auratum, Ivy-leaf Pelargonium, and various other subjects, with a backing of Bamboo, and an elegantly arranged fringe of drooping plants overhanging the green baize stage covering. The second prize was accorded Mr. J. V. Macdonald, gardener to G. H. Kenrick, Esq., Edgbaston, Birmingham, who elected to try conclusions in this class instead of his usual contest in the original class already indicated. His wealth of Orchids, grand Codiaëums (Crotons), and other fine-foliage plants ought to have won the leading position; but having adopted his of late years system of arrangement, as in the old large grouping, it lacked effect from a point of view a few feet distant, with also a meagreness in the frontal edging. The third prize fell to Mr. George Hancock, West Bromwich, for a creditable arrangement.

For six exotic Ferns, Mr. Macdonald won the first prize with excellent large specimens; second, Mr. A. Cryer, gardener to J. A. Kenrick, Esq., Edgbaston; and third, to Mr. H. Blakeway, gardener to Sir A. Muntz, Bart., M.P., Rugby.

There was a spirited contest in the class for a collection of flowering plants in 9ft by 5ft. There were some half-dozen groups, and the first prize deservedly fell to Mr. R. Sharpe, gardener to H. Lovatt, Esq., Northampton, for a splendid assortment of Cannas, being uniformly well flowered on dwarf and healthy foliaged plants; the second prize was accorded to Mr. Robson, Altrincham, for a superb lot of Carnation Princess of Wales; and the third, to Mr. J. Dickson, gardener to S. T.

Mander, Esq., Wightwick Manor, Wolverhampton, for a fine lot of *Crassula coccinea*.

In the class for sixteen stove and greenhouse plants (Orchids excluded), the Messrs. Cypher, as usual, were to the fore with some of their huge specimens, the names of which being so familiar to the readers of the Journal it would be supererogatory to again mention them. Mr. W. Vause, Leamington, the only other exhibitor, was placed second. In the class for twelve plants (Orchids excluded), the foregoing contestants were similarly placed. For twenty plants, in pots not to exceed 8in, at least eight to be in bloom, Messrs. Cypher won the first prize.

Roses.

In the class for seventy-two blooms there were four competitors (first prize £20), and Messrs. R. Harkness and Co., Hitchin, distinguished themselves by securing the lead. The collections contained several fine blooms, both of the newer and older varieties. The same remarks also apply to Messrs. B. R. Cant and Sons, Colchester, who were a close second; the third prize fell to Messrs. Prior and Son, and the fourth to King's Acre Nurseries Limited, Hereford.

There were seven exhibits in the class for forty-eight blooms, Messrs. Harkness again coming off victorious with very good examples; closely followed by Mr. G. Mount, of Canterbury; whilst Ben Cant and Prior and Son were respectively third and fourth.

For eight distinct varieties, three blooms of each, there were nine entrants. Mr. G. Mount was easily first with a beautiful exhibit of Caroline Testout, Bessie Brown, Mrs. John Laing, Ulrich Brunner, Mildred Grant, and Mrs. W. J. Grant amongst his best; second, the King's Acre Nurseries, with excellent blooms of A. K. Williams, Bessie Brown, Lady Mary Fitzwilliam, Marie Baumann, Caroline Testout, K. A. Victoria, Mrs. John Laing, and Marquise Litta. The third and fourth prizes went respectively to Messrs. Harkness and Messrs. Dickson and Son, Newtownards, Belfast.

In the class for twelve bunches of Roses (first prize £5) there existed some ambiguity, inasmuch as the first prize contestant (Mr. G. Mount) had seven fine blooms of a dull red Hybrid Perpetual unnamed variety, divested of the buds, which created considerable comment, as being against the rules. Mr. G. Prince, of Farrington, Berks, was accorded second for huge bunches of Tea and decorative Roses with the buds as cut; third, the King's Acre Nurseries, with fewer blooms.

In the class for twelve Roses, new varieties of 1900, 1901, and 1902 (first prize gold medal, value £3, and cash £2), Messrs. B. R. Cant and Sons were first with Robert Scott, Lady Moyra Beauclerc, Mildred Grant, Apothekar G. Hofer, Alice Lindsell, Gladys Harkness, Frau Peter Lambert, Frau Karl Druschki, Madame Jean Dupuy, Edmond Deshayes, and Prince de Bulgarie. The second prize fell to Messrs. A. Dickson and Sons; and third, to Messrs. Perkins and Sons, Coventry. The latter did not exhibit in any other class owing to the lateness of the season.

For twenty-four distinct varieties (for exhibitors not showing in the class of seventy-two varieties) the first prize fell to Mr. G. Mount; second Messrs. L. Townsend and Sons, Worcester; third, Mr. G. Prince, Longworth, Berks. For nine distinct varieties of T's and N's, seven blooms of each, in vases, Mr. G. Prince was placed first; second Messrs. Prior and Son; third G. Mount. In the classes for twelve blooms, one variety, there were fourteen exhibits, forming, as they collectively did, an attractive feature. For a box of light coloured Roses G. Mount led with Mildred Grant; second, Messrs. Townsend and Son, with Bessie Brown; and third, the King's Acre Nursery, with the same. For twelve blooms of Tea Roses G. Prince won the first prize; King's Acre Nursery second; and Messrs. Townsend and Son third prize. There were one or two other classes for Roses, such as bowls of blooms, Sweet Briars, &c., all more or less meritorious.

Sweet Peas were shown in excellent form both as regards quality and the arrangement generally. For an arrangement for effect, Messrs. Jones and Sons, Shrewsbury, were the only exhibitors, but well deserved the first prize. For eighteen varieties, Mr. E. Amies, Stafford, won with a capital arrangement of fine and clean blooms of the leading varieties. The second prize went to Mr. R. Piazzani, Ryton, near Sheffield; third, Messrs. Jarman and Co., Chard. Mr. Bastin was awarded an honorary prize for a collection of Sweet Peas in pots and trained to tall stakes. This system no doubt answers well for an early crop under glass, but the somewhat straggling growth does not altogether commend itself in the exhibition tent. There was a keen competition for the prizes offered by Mr. Henry Eckford and Mr. Robert Sydenham.

Pansies and Violas formed an attractive feature, and Mr. F. C. Brookes, gardener to Councillor W. Waters, Acock's Green, was awarded the first prize for a most tastefully arranged display of Violas; the second prize fell to Mr. W. Pemberton, Walsall, and the third to Messrs. Harkness and Son.

Hand bouquets were not so numerous as on some former occasions, the chief exhibitors being Messrs. Perkins, of Coventry, with examples of their most artistic combinations.

Messrs. Suckling, Leaming, and W. Jenkinson were successful contestants with dinner-table decorations, including also Mr. W. Vause. Begonias were grandly shown, the first prize being awarded to Mr. A. Cryer; second Mr. B. Sharpe; and third to Mr. T. F. Simpson, gardener to C. T. Mander, Esq., Compton, near Wolverhampton. Gloxinias were remarkably fine. A meed of praise should be awarded to the veteran Curator of the West Park for the fine collection of Caladiums, interspersed with elegant Humeas, and edged with Begonias and Ferns.

Fruit and Vegetables.

As already remarked, fruit was unusually well shown. For a collection of eight dishes, Pines excluded (first prize, £10), Mr. J. Doe, gardener to Lord Savile, Rufford Abbey, Notts, was, as last year, placed first with fine examples of Madresfield Court and Muscat of Alexandria Grapes, a grand dish each of highly coloured Dymond and Stirling Castle Peaches, a good dish of Improved Downton Nectarine, a fine dish of Royal Sovereign Strawberries, Brown Turkey Figs, and a large and finely netted Melon, Taunton Hero. Second, Mr. J. H. Goodacre, for three large and compact, well finished bunches of Black Hamburgh and Muscat of Alexandria Grapes, good Royal George and Belle-garde Peaches, large and highly coloured Lord Napier Nectarines, Brown Turkey Figs, and a large Countess Melon. The third prize fell to Mr. T. Bannerman.

For four varieties of Grapes the first prize was awarded to Mr. S. Barker, gardener to the Duke of Newcastle, Worksop Manor, with good examples of Foster's Seedling, well finished Black Hamburghs, beautiful examples of Madresfield Court and Buckland Sweetwater. The second prize went to Mr. Bannerman, with fine Black Hamburgh, Muscat of Alexandria, Madresfield Court, and Foster's Seedling. The third and fourth prizes were taken respectively by Mr. J. Doe and Mr. J. Read, gardener to the Earl of Carnarvon, Brethby Park, Burton-on-Trent. For two bunches of white Grapes Mr. S. Barker was to the fore with well ripened and fine bunches of Buckland Sweetwater; second, Mr. B. Ashton, gardener to the Earl of Lathom, Ormskirk, with the preceding same varieties; and third, Mr. Bannerman. An extra prize was awarded to Mr. H. Doe for two bunches of large berried but unripe Muscat of Alexandria.

Peaches were remarkably well shown. The first prize was awarded to Mr. J. Doe for highly coloured Dymond; second, Mr. B. Ashton, for large Hales' Early; and third, Mr. S. Barker, with Royal George. For a dish of Nectarines Mr. J. Read was first with large and highly coloured fruits of Humboldt; and second Mr. R. Nisbet, gardener to W. A. H. Bass, Esq., Burton-on-Trent, for a fine dish of Lord Napier.

Melons were numerous shown, and for a scarlet flesh Mr. Goodacre won the first prize; second, Mr. T. Bannerman, with Searlet King; and third, Mr. J. Doe, with Sutton's Searlet. For a green-flesh variety Mr. T. H. Bolton, Beaumaris, North Wales, secured the first prize for a very large and finely netted Royal Jubilee; second, Mr. R. Nisbet, with The Peer; third, Mr. B. Ashton.

There was but one entry for Strawberries, the varieties being Leader, Royal Sovereign, and another variety similar to Leader. Tomatoes were well shown, and for three dishes Mr. J. Read was the victor with Sutton's Best of All, Sutton's Perfection, and another variety; the second prize fell to Mr. J. E. Knight; and the third to Mr. H. Wright, gardener to W. Aldon, Esq., Kingswinford.

Collections of vegetables were not so numerous as on some former occasions. For Messrs. Sutton's prizes Mr. J. Gibson, gardener to R. W. Hudson, Esq., Marlów, was awarded the first prize with medium sized examples of good quality; second, Mr. B. Ashton; and third, Mr. Bastin. For Messrs. Webb and Sons' prizes Mr. W. L. Bastin was awarded the first prize; second, Mr. E. Beckett; and third, Mr. B. Ashton.

Medal Awards.

The following is the list of medal awards:—Large gold medal: Smith and Co., Worcester, for plants and cut flowers; Blackmore and Langdon, Bath, Begonias in pots; J. Forbes, Hawiek, Phloxes and Carnations; Webb and Sons, Wordsley, Begonias, &c. Gold Medal: Wolverhampton Parks and Baths Committee, foliage and flowering plants; W. Artindale and Son, Sheffield, cut Carnations; W. B. Child, Aeock's Green, herbaceous cut flowers; G. Jaekman and Co., Woking, Irises, Water Lilies, &c.; Dobbie and Sons, Rothesay, cut flowers; Dickson, Ltd., Chester, cut flowers; Tom B. Dobbs and Co., Wolverhampton, rustic rockery. Silver medal: Jones and Son, Shrewsbury, Sweet Peas; Ranelagh Nurseries, Leamington, Asparagus myriocladus; J. H. White, Worcester, cut flowers and plants; Jarman and Co., Chard, hardy cut flowers, &c.; Hewitt and Co., Solihull, cut flowers; W. Waters, Aeock's Green, Violas; the Vineries, Ltd., Aeock's Green, Phloxes, &c.; R. Sydenham, Birmingham, Sweet Peas, &c. Bronze Medal: W. D. Bason, Wolverhampton, Sweet Peas, &c.; R. Lowe, Wolverhampton, stove and greenhouse plants; W. Pattison, Shrewsbury, Violas; W. Knight, Wolverhampton, cut flowers; J. Robson, Altrineham, flowering plants; W. and J. Brown, Peterborough, pot plants

and cut flowers. First class certificates: Dobbie and Co., Rothesay, new variety Sweet Peas, Florence Molyneux; J. Forbes, Hawiek, new Phlox, Miss Willmott; the Leamington Nurserymen and Florists, Ltd., new Carnation, Leam Queen.

Croydon Horticultural, July 8th.

Ideal weather favoured the annual show of the society, which was held in the grounds of Addiscombe Court. Roses were not of very great merit, but the exhibition all through was of interest.

OPEN ROSE CLASSES.—A N.R.S. silver medal and 45s. was accorded as first, and three competitors were forward, the honours falling first to Ben Cant and Son, second to Prior and Son, and third to Frank Cant and Co. B. Cant had no outstanding blooms, but just a good even set, and even some very worthless flowers. Frau Druschki was one of the best; Apotheker G. Hofer was another, and this newcomer is a grand thing when got well. What are its merits or failings? And there were shapely flowers of Marguerite Appert, H. Vernet, and U. Bunner. A good Bessie Brown and Star of Waltham were Prior's choicest; and F. Cant had a nice general set, but rather the worse for wear.

The twenty-four distinct trebles brought no less than five competitors, of whom B. R. Cant was foremost; Prior and Son second, and Paul and Son third. Though decidedly irregular, Ben Cant's set included White Maman Cochet, A. K. Williams, Brunners, Brides, Druschkis, and Papa Lambert; while Bessie Brown and A. Rivoire greatly helped Prior.

D. Prior's twelve of a sort in class 5 were gems of Rose beauty, being smooth, pure, well-finished Bessie Browns. With Frau Druschki (which he shows consistently well) Frank Cant came next; and B. R. Cant third with Her Majesty. The order for twelve Teas or Noisettes in class 6 ran this: F. Cant and Co., Prior and Son, and B. R. Cant, with the respective varieties Mrs. Mawley, Maman Cochet, and Medea. Mr. Will Tayler, of Hampton, led for the twelve bunches of Garden Roses; and for the six, in class 13, Mr. Tate, of Downside, was first.

In class 3A, for two dozen kinds, Mr. T. Butcher, South Norwood, beat Mr. Will Taylor, and third, Mr. F. J. Jeffreys, West Croydon.

Frank Cant led for eighteen Teas and Noisettes (class 4) with blooms much below the average; second Prior and Son, and B. R. Cant third.

The new challenge eup, or bowl, competition in the eighth class, for thirty-six blooms, enticed four entries, and Mr. Tate rather easily led with well set up flowers. His Marchioness of Dufferin was the largest flower of this we have seen, and his Mrs. J. Laing obtained a medal. Mrs. Haywood, of Woodhatch, was a fair second, and Mr. Eversfield, of Horsham, third. Only three faced the judges for twenty-four Roses (class 9), the winners being Mrs. Haywood, Mr. Eversfield, and Mr. Slaughter, of Steyning.

For the eighteen Teas, Mr. Eversfield beat Mrs. Haywood, but the order was reversed for the half-dozen Roses in trebles. Again Mrs. Haywood led for twelve of a kind in class 12, having even flowers of Her Majesty, one of the best sets in the show, and Mr. K. H. Gifford was second with Mrs. Laing. Mr. Ed. Mawley led for twelve distinct varieties with creditable flowers; and Mr. F. Wellesley beat Mr. Eversfield for twelve Teas or Noisettes in class 15. Miss B. H. Langton, of Raymead, Hendon, led with good flowers in four distinct trebles, Mr. Mawley making a weak second. Chief winners in other classes were A. G. Hammond (for nine), Miss Langton for a like number of Teas, and R. W. Bowyer, Hertford, for six distinct in class 19, these being good flowers.

Other features of the show were the Sweet Peas, all poorly staged when we consider the excellent examples of Mr. Eekford and Mr. Jones (Shrewsbury). The double Tuberous Begonia flowers were very excellent, and Gloxinia flowers, with Maiden-hair Fern fronds in vases, were pretty, though one likes best to see the plants. There were also classes for Shirley Poppies—those lovely annuals—and Zonal Pelargoniums. The way to stage stove and greenhouse flowers effectively was demonstrated by Mrs. C. J. Salter, wife of the gardener at Woodhatch Lodge, Reigate, and how *not* to do so was seen on the stage backing her collection. The flowers should be shown in loose, free bunches, taller ones at the back and well held up, and a nice contrast should pervade the lot.

The table decorations were on the whole good, but the eyes of critics are never satisfied. The Croydon ladies, however, are well ahead of their compatriots in many other centres.

Miss E. M. Robinson, Hillside, Purley, led for the decorated table (having five other competitors), Mrs. A. C. Robinson, 3, Stafford Road, Wallington, followed, and Miss Langton third. The winners for twelve cut flower bunches were Messrs. C. Perrett, A. G. Mason, and C. Brooks in this order.

We must compliment Mr. Phillips, gardener to Colonel Inglis, of Craigendorrie, Reigate, on his very handsome group of plants, which won for him £7 and a silver-gilt medal in class 61. The "stuff" was good, well selected, and tastefully put together—a good object-lesson for others. Mr. Lewry, of Duppas Hill



Passiflora caerulea.

The blue Passion Flower is all but hardy as a climber, but in any case it is a beautiful cool-house plant. We have always found it to flower freely wherever grown, and it enjoys a fairly rich, well-drained soil; but the roots are best confined, in order to prevent too rampant growth.

Terrace, had the best six Caladiums; and fair samples they were. Table plants and vegetables were more or less mixed up, for the latter lined the front row to a banking of Crotons and Fuchsias, the pungency of Onions affording a spiciness to the sweeter and softer odours of the flowers. The smaller groups and classes for plants do not call for special notice, but the six Zonal Pelargoniums from Mr. A. G. Mason, of 18, Chichester Road, were far superior to what one usually sees.

FRUIT was a small but meritorious section. Mr. F. Phillips led for the six dishes with Melon, Grapes, Figs, Pineapple Nectarine, Madame Trève Pears, and Strawberries. First, second, and third for the Melon went respectively to Mr. O. Jeal, Mr. H. Harris, and Mr. F. Phillips. Mr. J. W. Barks led for three white Grapes with Buckland Sweetwater; second, Mr. Lintott, with Foster's Seedling; and third, Mr. Harris, with the same. Mr. Lintott had the best fifty Strawberries; Mr. Lintott the best three black Grapes; with C. Blurton second, both having Hamburgs, and Mr. J. W. Barks third. Good Tomatoes were staged, Mr. Phillips leading for six in class 48, and J. Knapp for six in class 59.

Four collections of salads were presented, and the winners were Mr. Collins, of Park Hill; Mr. Perrett, of Duppas Hill; and Mr. Lewry, third, each with excellent basketsful. There was fair competition in the other classes.

Among non-competitive exhibits were Sweet Peas in pots from J. Peed and Son, Cannas and Kochia scoparia from Messrs. Cannell, stove and greenhouse plant groups from John Laing, of Forest Hill, cut flowers from Cheal, of Crawley, Amos Perry, and Thos. Ware, Limited. Paul and Son and Geo. Jackman and Son each staged collections of Roses, while John R. Box had rock plants and Begonias.

Ealing Horticultural, July 8th.

Ealing grows rapidly in population, but at the cost of a decline in the quality of the exhibits seen at the exhibition of the horticultural society. Small estates, the gardens of which at one time furnished many specimen plants, cut flowers, and fruit, have been built over; there is a multiplication of small villa residences; but large gardens disappear in a regretful manner. An Ealing exhibition has therefore deteriorated in quality, and as, with the exception of two classes, which are thrown open to all comers, the exhibits must come from the immediate neighbourhood, the range is a limited one. Still, a very respectable exhibition is provided, and that for 1903 took place in Walpole Park, in the centre of the town, four large tents being required.

Plants consisted of groups arranged for effect, and these were shown in two classes. In the case of the large group the first prize was taken by Mrs. Peal, Fernhurst (S. Whittaker, gardener), who made good use of some tall Fuchsias, with which he associated other flowering and some good flowering plants. Mr. John Harris, Northcommon Road (W. Roberts, gardener), took the second prize with a neat and effective group. In the case of the smaller group Mr. H. W. Peal, the Mayor, Oakhurst (C. Edwards, gardener), was first, and Mr. M. Hulbert, Edghill Road (T. Skingle, gardener), second. There were two classes for fine-foliaged plants, one for six and one for four specimens; and also for Ferns and plants in flower, none of the exhibits calling for special remark. In the class for six plants for table decoration, in which Mr. F. G. Gledstanes, Old Manor House (F. Milson, gardener), was placed first with some bright and even specimens. Among them was *Leca amabilis*, a plant having deep olive green leaves veined with silver, the genus having been named after James Lee, the father of John and Charles Lee, who had the Vineyard Nursery at Hammersmith. It was in such charming character that it seems a pity it is not more generally grown. Caladiums were fairly good. The best specimen flowering plant was *Begonia corallina*, and the best foliage plant *Asparagus plumosus*, both good examples. Some good bush and standard Fuchsias were staged; there were excellent *Streptocarpus* from Mr. A. G. Dixon, and excellent *Gloxinias* and *Begonias* from the Mayor, which did his gardener much credit. Mosses were good, and so were *Petunias*, in both cases the first prizes going to Mr. M. Hulbert.

Two classes for Roses, viz., one for forty-eight blooms and one for twenty-four blooms, are open to all comers, and on this occasion Messrs. G. and W. Burch, nurserymen, Peterborough, were first in both classes, and they staged very fine Roses, among them *Her Majesty*, *Bessie Brown*, *Souv. de President Carnot*, *A. K. Williams*, *Ulster*, *Antoine Rivoire*, *Marchioness of Londonderry*, *Gladys Harkness*, *Lady Mary Fitzwilliam*, *Frau Karl Druschki*, *Mildred Grant*, *Comte de Raimbaud*, *Kaiserin Augusta Victoria*, *White Lady*, *Mrs. Sharman Crawford*, *Madame Cadeau Ramey*, *Lawrence Allen*, &c. Mr. C. Turner, Royal Nursery, Slough, was second with good bright blooms, somewhat smaller, the leading varieties much the same. Roses were also creditably shown by local amateurs. The society's silver cup, offered for twenty-four blooms, was won by Mr. W. Owen, Castlebar (R. Green, gardener). Other cut flowers included stove and greenhouse subjects, *Gloxinias* in bunches, finely shown by the Mayor and others. There were

good cut *Begonias*, bedding and Ivy-leaved *Pelargoniums*, hardy flowers, and Sweet Peas.

Fruit is never a strong feature at Ealing, but the usual quality was lifted up a bit through Mr. Mitsom showing good white and black Grapes, and also Strawberries; other hardy fruits were scarce. The gardeners also showed vegetables in several classes.

From the allotment gardens at Ealing, of which there are a large number, the cottagers brought excellent produce, which made some of the vegetables staged by gardeners look inferior. There were several classes for small collections, in which good produce was staged; they had excellent Potatoes, round and kidney; Cauliflowers, Peas, Longpod and Broad Beans, wonderfully fine white Tripoli Onions, and Vegetable Marrows, and interesting collections of herbs and salads, altogether a valuable addition to the show.

There were pretty table decorations arranged by the ladies of Ealing, also stands, vases, bouquets, dinner tables, &c.; and Mrs. H. B. Smith, Court florist, Ealing, set up some delightful illustrations in floral decorations, which proved valuable object lessons for the ladies who take a part in the competitions.

A group of plants contributed by Mr. James Hudson, Gunnersbury House Gardens, had as a foreground flowers of *Nymphaea stellata*, and a large and deeper blue variety from Berlin named *W. Stone*; also a large seedling from *gigantea*, and several varieties of the fine new hardy Water Lilies of recent years, all in water, an extremely attractive exhibit. Mr. Geo. Reynolds sent from Gunnersbury Park a very fine group of plants also, including Palms, *Ixoras Fraseri* and *Williamsi*, several very fine Carnations in pots, a batch of the blue-flowered *Exacum macranthum*, &c. Messrs. Fromow and Son, nurserymen, Turnham Green, set up a very fine collection of admirably coloured Japanese *Acers*, mingled with white Lilies.

Hereford and West of England Rose, July 8th.

The thirty-seventh of the annual exhibitions of this society was held on Wednesday, July 8. We regret to say that the effect of the late cold and ungenial season was conspicuous everywhere, though mostly in the fewness of the exhibits, as many blooms in the boxes staged by Alexander Dickson and Sons, Newtownards, Belfast, and the King's Acre Nurseries, Hereford, were of superior quality. It was very unfortunate that several Rose exhibitions were fixed for the same day. There is a great deal in what your bright critic, Mr. W. R. Raillem, lately proposed in our Journal, that the National Rose Society, on the lines of the Marylebone Cricket Club, should fix the dates for the several Rose shows; but, alas! such a plan would be utterly unpractical. We of Hereford, for instance, the oldest Rose show in existence, never would consent to take a back seat, and yet would have to do so in friendly rivalry with the great centres of industry and trade, railway supplied from every quarter, such as Birmingham, Leeds, Manchester, &c. This difficulty unfortunately exists; but, it is to be remembered, always has existed. I happen to have a schedule of our Rose show for 1877, where "£35 special prizes are offered to nurserymen for seventy-two varieties, *not residing in Herefordshire*"; and this apparently tempting offer failed to draw, though supplementary of the ordinary prize list of £150! No; all affiliated Rose societies, to pay their way, must, as a rule, expect to be more or less localised, and trust to other floral and scenic attractions, as we of Hereford, through our thoroughly up-to-date hon. sec., have every year been successful. We also find that collections of herbaceous plants are most attractive, and in great favour with the general public. Still, your old-fashioned reporter heaves a heavy sigh over the Rose show. It is interesting to notice how different varieties of Roses have their year, and doubtless with some advantage, as bringing to the front some first-rate varieties which otherwise would die out, and preventing a superabundance of other favourites. How few of *La France* we have seen this year! But those two new H.P.'s, without comparison the best dark and light, *Ben Cant* and *Frau Karl Druschki*, both of exceptionally strong growth, have been good, the latter particularly so.

Messrs. Alexander Dickson and Sons carried all before them, gaining every first prize in their power, except the twelve of any one light variety, which first prize they divided with the King's Acre Nursery Co., Ltd., Hereford. Subjoined is a list of Alex. Dickson and Sons' best blooms, and the names of others rarely seen: *Mildred Grant* (superb), *Duchesse de Vallombrosa*, *Star of Waltham*, *Lady Mary Fitzwilliam* (grand), *Gladys Harkness*, *Bessie Brown* (immense), *Frau Karl Druschki* (superb), *Florence Pemberton* (new, good), *Robert Scott* (a great acquisition), *Lady Clanmorris*, *Antoine Rivoire* (splendid centre), *Danmark* (good), *Ulster* (grand), *Madame Delville* (splendid), *Alice Lindsell*, *Xavier Olibo*, *Marchioness of Dufferin*, *Mrs. Conway Jones* (new), *Mrs. E. Mawley* (fine), *Chas. Darwin*, *Countess of Annerley* (fine, new), *Mrs. Geo. Kirk* (new), *Killarney*, *Sir Robert Stout*, *Duchess of Albany*, *C. Delhomme*, *Lena* (new, good), *Edith Dombrian* (grand), *Liberty*, *Marchioness of Downshire* (magnificent), and *Prince Arthur*. Of these; *Alice Lind-*

sell, Florence Pemberton, Edith Dombrain, Mildred Grant, Robert Scott, Bessie Brown, Frau Karl Druschki, and Ulster were very fine blooms. Second prize The King's Acre Co., which included magnificent specimens (though smaller than the first prize) of Caroline Testout (very fine), Frau Karl Druschki (superb), White Lady (lovely), and Danmark (very good).—HEREFORDSHIRE INCUMBENT.

In the "36's" Messrs. Townshend and Sons, of Worcester, repeated their last year's success with a very praiseworthy display, including Alphonse Soupert, Queen of Queens, Countess of Oxford, Marjorie, Grace Darling, Killarney, and Clio. Mr. Pewtress was second with a good show, including Duchess of Bedford, Ulster, Mrs. Edward Mawley, and others.

Amongst the successful amateurs were several prominent growers, including Mr. Conway Jones, Mr. R. Foley Hobbs, Preb. Ashley, Mr. W. E. King-King, Mr. T. Llanwarne, and others. The silver medal for the best Hybrid Perpetual exhibited by an amateur was won by Mr. Conway Jones, of Gloucester, with the Marchioness of Londonderry. He was the first prize winner in the class for twenty-four varieties, and showed some lovely specimens, including White Maman Cochet, Crown Prince, Souv. de President Carnot, Maman Cochet, Ulster, Lady Moyra Beauclerc, Madame Cusin, Comtesse de Commarde, Madame L. Ramey, Innocente Pirola, Kaiserin Augusta Victoria, Suzanne Marie Rodocanachi, and others. Mrs. Mawley was regarded as the best bloom in division three, for Herefordshire amateurs, who showed up very favourably with the nurserymen. Despite the season there was an excellent show of the Tea and Noisette varieties.

In the nurserymen's class for twelve varieties Messrs. Townshend and Co. were well deserving of the first prize, their collection being a fine one. Messrs. Pewtress Bros.' stand of blooms made a good second, however, their Mrs. Edward Mawley being a nice bloom. A striking stand was that of Mr. Conway Jones, who took first, and also the silver medal of the National Rose Society, in the amateur class for twelve distinct varieties. There was a keen struggle for premier honours in the open class for twelve of one sort of any light Rose between Messrs. Dickson and the King's Acre Nurseries, who each exhibited Mildred Grant. Both exhibits were of great merit, and undoubtedly they were the best two boxes of blooms in the show. The first prize was divided between those well-known firms. In the dark Rose class Messrs. A. Dickson and Sons won with a box of Tom Wood, the King's Acre Nurseries being second with Alfred K. Williams. Messrs. A. Dickson and Sons were the only exhibitors in the class for yellow Roses, but their box of Augusta Victoria fully deserved the first prize. They were again successful in gaining the first prize in the class for white Roses with a good box of Bessie Brown.

In the class for garden Roses of not less than six varieties, the first prize went to Messrs. Townshend, of Worcester, a noteworthy feature in their collection being the Crimson Ramblers. Mrs. Davenport was second with a good collection, embracing well known varieties. Messrs. Townshend were also given first in the class for hybrid Sweet Briars.

Southampton, July 8th and 9th.

Much the best of the many good shows held on the Royal Pier was that under notice, held under the auspices of the Royal Southampton Horticultural Society. Roses, in numbers, were, perhaps, the weakest feature, although in point of quality little was left to be desired. Sweet Peas were a magnificent display, hardy flowers excellent, fruit and vegetables numerous and good, especially the latter, while trade exhibits added immensely to the interest of the show. As usual, the necessary arrangements were of that high order of merit which is the rule here under the experienced guidance of Mr. C. S. Fudge, the courteous secretary.

ROSES.—For thirty-six, distinct, Messrs. D. Prior and Son, Colchester, were distinctly ahead with medium sized, highly coloured fresh blooms, especially noteworthy being Madame Cochet, Alfred Colomb, Francois Michelon, Innocente Pirola, Charles Darwin, White M. Cochet, Madame E. Verdier, Madame Sharman Crawford, Jeannie Dickson, Marchioness Londonderry, Her Majesty, and Ernest Metz. Messrs. Rogers and Son, Bassett Nurseries, Southampton, second, with smaller, well coloured blooms.

For twelve triplets, distinct, Messrs. Prior again won with representative blooms of Bessie Brown and Mrs. W. J. Grant. Messrs. Rogers were again second. In the class for twelve Teas or Noisettes the competition was exceedingly keen, many fine stands being staged. Mr. W. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester, secured the coveted award with a magnificent exhibit of White M. Cochet, M. Cochet, Madame Hoste, Anna Olivier, Madame Cusin, Golden Gate, and Mrs. E. Mawley. Messrs. Prior here had to be content with second place, although the exhibit was a capital one. Messrs. Rogers third. For six, any one dark variety, Messrs. Prior won with Gustave Piganeau; Messrs. Rogers following with Marquis Litta. No less than seven entered for the six of any light variety, Mr. G. H. Kent, gardener to Mrs. E. Croft Murray, Perivale, Ryde, winning with White Maman Cochet; Mr. G.

Ellwood, gardener to W. H. Myers, Esq., M.P., Swanmore Park, Bishop's Waltham, second, with very fine Caroline Testout; and Messrs. Prior third with Bessie Brown.

Gentlemen's gardeners and amateurs was a strong section, so numerous were the exhibits. For eighteen, distinct, five competed. Mr. Neville was the most successful, winning with a capital set. D. D. Seaton, Esq., Woodside Cottage, Lymington, was a good second; and Mr. G. H. Kent third. For the twelve and for twelve Teas or Noisettes Mr. Neville was unassailable, staging magnificent blooms of W. J. Grant and Frau Karl Druschki. D. Seaton, Esq., followed in both classes. For twelve, in not less than eight varieties, Mr. O. Trickler, gardener to A. Searle, Esq., Ashton Lodge, Bassett, won with a good exhibit of popular varieties.

Six competed for a vase of Roses. Mr. T. Hall, gardener to Sir S. Montagu, South Stoneham House, Southampton, was first; Mr. Barnes, gardener to Mrs. Austin, Bishop's Waltham, second. For a basket of Roses, open to ladies only, Miss Minnie Snellgrove, 10, Oxford Road, Southampton, won first with an admirable display; Mrs. C. S. Fudge followed exceedingly close; Mrs. Jeffrey third.

SWEET PEAS.—Competition in these classes was keen, and a magnificent display was the result. For nine distinct varieties, arranged with their own foliage, no less than twelve competed, making a charming display. Mr. C. W. Breadmore, 120, High Street, Winchester, secured the leading award with grand examples of the following: Lord Rosebery, Navy Blue, Salopian, Miss Willmott, Graeie Greenwood, Lady Grisel Hamilton, Jeannie Gordon, Duke of Westminster, and Dorothy Eckford. H. H. Lees, Esq., Grosvenor Villa, Portswood, a very close second, staging marvellous blooms of similar varieties. Mr. T. Hall, a good third.

Mr. R. Sydenham, Birmingham, offered the prizes for nine distinct varieties, for which seven competed. Mr. T. Matthews, gardener to Mrs. Maltby, Shirecroft, Botley, won with a good set: Hon. F. Bouverie, Miss Willmott, Coccinea, Prince of Wales, and Black Knight were the most conspicuous. Mr. A. Maple, Shirley, second; Mr. F. Cozens, Downhams, third. Mr. Breadmore also offered prizes for nine varieties. Mr. C. H. Holloway, gardener to Lord Aberdare, Longwood House, Winchester, secured the premier award; Mr. F. M. Vokes, Birch Lawn, Sholing, second; Mr. Cozens, third.

HARDY FLOWERS were a great feature of the show. For twelve bunches, distinct, five staged. Messrs. B. Ladhams, Limited, The Nurseries, Shirley, were the most successful with a charming display of the following: Gaillardias oculata and Brilliant, Pentstemon azureus, Rudbeckia californica, Centaurea macrocephala, Delphinium President Loubet (fine spike of the richest blue), Campanula coronata alba, Centaurea ruthenica, Alströmmeria pulchella, Oenothera speciosa, Genista tinctoria plena, and Pæonia Faust. Mr. Ellwood was a good second; and Mr. Breadmore third. For nine bunches, Mr. Valentine, gardener to H. E. Sugden, Esq., Ingersley, Chilworth, won with a good display; Mr. Vokes second, and Mr. W. Osman, gardener to Mrs. Anderson, West End, third.

PLANTS were fairly well shown. For four stove and greenhouse specimens Mr. E. Wills, The Nurseries, Southampton, was first, as also was he for the best group of miscellaneous plants arranged for effect. Mr. T. Hall won for three Palms, six Caladiums and six Zonal Pelargoniums. Ferns were well staged by Mr. F. W. Bowles, gardener to F. W. Spranger, Esq., Spring Hill Court, Shirley. Mr. Wills had the best Begonias.

VEGETABLES always are grandly staged here. This year they were even better than at any previous show. Messrs. Toogood and Sons, Southampton, provided handsome prizes for six distinct varieties, for which no less than eight competed. Mr. E. Beckett, gardener to Lord Aldenham, Aldenham Park, Elstree, Herts, easily won the coveted award with grand examples of Champion Potato, Tremendous Pea, Wonderful Tomato, and Intermediate Carrot. Mr. J. Mitchell, gardener to J. Willis Flemming, Esq., Chilworth Manor, second, Mr. Holloway third. In the class where the prizes were provided by Messrs. Sutton and Sons, for six distinct dishes, the real tug of war came between the two champions, Mr. Beckett and Mr. Gibson, gardener to R. H. Hudson, Esq., Danesfield, Marlow. Mr. Beckett just managed to secure the leading place with magnificent examples of Duke of York Potato, Perfection Tomato, Duke of Albany Pea, White Leviathan Onion, Early Giant Cauliflower, and New Red Intermediate Carrot. Mr. Gibson excelled in Tomatoes and Onions especially, but dropped in Peas and Cauliflowers. Mr. Bowerman, gardener to Lord Bolton, Hackwood Park, Basingstoke, third, with a capital collection. The last-named was the most successful for Messrs. Carter's prizes, with a good all-round exhibit; Mr. Vokes second.

FRUIT, though not largely shown, was good in quality. For three bunches of Grapes, distinct, Mr. O. Eastwell, gardener to L. Walker-Munro, Esq., Rhinefield, Brockenhurst, was first with Madresfield Court, Foster's Seedling, and Black Hamburgh; Mr. Holloway second. For two bunches, black, Mr. Eastwell was also successful with very fine Madresfield Court; Mr. Ellwood staged Black Hamburgh in good condition for second prize; Mr.

Bowerman third. Mr. Eastwell with Foster's Seedling won in the white Grape class; Mr. Bowerman second. For two dishes of Strawberries Mr. Hall won with magnificent examples of Webb's Refresher and Sir J. Paxton. Mr. Matthews won for one dish. The best Peaches were staged by Mr. W. Valentine.

NON-COMPETITIVE EXHIBITS were numerous, and added much to the beauty and interest of the show. Silver-gilt medals were awarded to the following:—Messrs. B. Ladhams for herbaceous plants, who staged grand bunches of Delphiniums, English Iris, Pentstemons, Potentilla W. Rollisson, Thalictrums, Heucheras, Coreopsis, and Phloxes. To Messrs. J. Peed and Son, Roupel Park Nurseries, Norwood, for a magnificent display of Gloxinias. To Mr. W. C. Breamore, Winchester, for a fine dozen bunches Sweet Peas, distinct varieties, of wonderful quality. To Mr. J. M. Newton, gardener to W. Garton, Esq., Roseland, Woolston, for a group of miscellaneous plants, and another of finely grown Gloxinias and Pelargoniums.

Silver Medals were granted to the following:—W. H. Myers, Esq., M.P., for thirty-six bunches Garden Roses, distinct, of which the following were conspicuous: Gustave Regis, Queen Alexandra, Psyche, Macrantha, Papa Gontier, Leuchstern, Bardou Job, Madame Eugène Resal, Lucida plena, Crimson Rambler, and Cheshunt Scarlet. To Mr. M. Prichard, Christchurch, for hardy flowers, Japanese Iris, Alströmérias, Spiræas, &c. To Mr. Wills for miscellaneous plants, wreaths, &c.

Bath, July 9th.

Despite the unfavourable traits of the season Bath maintained its old traditions so long associated with the summer show and the delightful show-ground, the Sydney Gardens. Fine weather, a large entry, and good attendance of the flower-loving public should help to reimburse the former shortcomings in the committee's exchequer.

Roses, which by common consent are the great feature of the show, though they tell eloquently some tales of past weather, were nevertheless magnificent and abundant, and attracted growers from a wide area. In the class for seventy-two distinct Messrs. A. Dickson, Newtownards, were once more the victors, their stand being conspicuous by its high quality. Amongst the best were Madame Eugène Verdier, Ulrich Brunner, White Lady, Comte Raimbaud, E. Y. Teas, Duc de Rohan, Mrs. J. Laing, Frau Karl Druschki, Caroline Testout, François Michelin, Gladys Harkness, Helen Keller, Mildred Grant (extra fine), Lady Mary Fitzwilliam, Souv. de Pres. Carnot, Auguste Rigotard, Madame Cadeau Ramey, Florence Pemberton (fine), Duchesse de Morny, Louis Van Houtte, Robert Scott, Bessie Brown, and Mrs. George Kirk (new). Messrs. Harkness and Co., Hitchen, came second; Souv. de President Carnot, Her Majesty, Mrs. J. Laing, Alfred Colomb, Helen Keller, and Marquis Litta were their best. The King's Acre Nurseries, Limited, secured the third prize; Earl of Dufferin, Mamie, Mildred Grant, Bessie Brown, Ernest Metz, and Hon. E. Gifford were very fine.

For thirty-six varieties in triplets Messrs. Dickson again won from the King's Acre Nurseries, staging good flowers among others of Louis Van Houtte, Marchioness of Dufferin, Bessie Brown, Alice Graham, Tom Wood, Mrs. Ed. Mawley, Dr. Andry, Marie Baumann, and Madame Cadeau Ramey. In the second prize exhibit were Charlotte Gillemot, Mrs. R. G. S. Crawford, Madame Abel Chatenay, and Killarney, distinct and good. Messrs. Cooling and Sons, Bath, were third.

Messrs. Townsend and Sons, Worcester, won with eighteen triplets, with Mrs. Sharman Crawford, Mrs. J. Laing, Killarney (fine), Bessie Brown, Kaiserin A. Victoria, and Mildred Grant in excellent order. Mr. G. Prince, Oxford, was second, showing as his most distinct Jean Ducher, The Bride, Maman Cochet (good), Mrs. E. Mawley, Comtesse de Nadaillac, and Souv. de S. A. Prince, very fine and pure. Messrs. A. A. Walters and Son, Bath, showed some very superior blooms for third place, notably Mrs. Ed. Mawley, Alfred Colomb, Madame A. Chatenay, and Duchesse de Morny. The class for thirty-six distinct varieties brought out a good competition, Messrs. Townsend and Sons winning first, Captain Hayward, Marquis of Downshire, Louis Van Houtte, Ellen Drew, Madame J. Cointet, Mrs. W. J. Grant, and a fine Comte Raimbaud being their best; Messrs. Walters and Son were second, and Mr. G. Prince third. The last named exhibitor secured the premier card for eighteen Teas or Noisettes, with nice blooms of Comtesse de Nadaillac, Souv. d'Elise Vardon, Maréchal Niel, White Maman Cochet, Golden Gate, and Catherine Mermet. Mr. J. Mattock, Oxford, was second; and Messrs. Townsend and Son third. An interesting and well-contested class was that for Roses in vases, twelve varieties, five blooms in each. Here Messrs. Cooling, Bath, secured leading place with remarkably fine and fresh blooms. Souv. de President Carnot, Robert Scott, Maman Cochet, Liberty, Madame J. Dupuy, and Bessie Brown were conspicuous. Mr. G. Prince came second, and Mr. J. Mattock third.

With Bessie Brown in perfect condition Messrs. Dickson won

with twelve of any one variety; Mr. Prince second with Mildred Grant. The King's Acre Nursery Co. and Mr. G. Prince won with twelve white or yellow, each staging Kaiserin A. Victoria. A bright stand of A. K. Williams won for the King's Acre Nursery Co. the prize for twelve crimson Roses; Messrs. Dickson following with Tom Wood. The latter took the lead in a class of twelve light pink or rose-coloured varieties with Mildred Grant. With six blooms of any new Rose Messrs. Dickson again won with Mildred Grant, a variety much in evidence, and greatly admired. Mr. Prince was second with the same variety.

With Garden Roses the Bath nurseries came out strongly, and their united efforts made an altogether fine and pleasing relief to the otherwise formal Rose exhibits in boxes. Messrs. Cooling and Sons and Messrs. Walters showed tables 8ft by 3ft very effectively set out with eighteen sorts in good-sized bunches. Madame J. Grolez, Irene Watts, Madame Falcot, Papillon, Killarney, Marquis of Salisbury, Ma Capucine, Luciole, and W. A. Richardson were distinctly good. Messrs. Walters won second with similar varieties. From the same nurseries came single and Moss Roses; also decorated tables, principally of Roses.

In the amateurs' section were some beautiful flowers from well-known competitors. For twenty-four distinct varieties Conway Jones, Esq., Gloucester, won first, showing bright, full blooms of Gladys Harkness, Comtesse de Nadaillac, Lady Londonderry, White Maman Cochet, Chas. Lefebvre, Edward Andry, and Ulrich Brunner. Second prize fell to the Rev. J. H. Pemberton, Havering, Essex, with Papa Lambert, Victor Hugo, Bessie Brown, Her Majesty, and François Michelin. A. Hill Gray, Esq., Bath, came third, but was more successful in the class for twelve triplets. Conway Jones, Esq., was second, and the Rev. J. H. Pemberton third. Mr. R. Foley Hobbs, Worcester, the Rev. R. Powley, and R. B. Cater, Esq., shared the prizes in the order of their names for eighteen distinct. There were classes, too, for twelve singles and six triplets, as well as local classes, and all were keenly contested.

The N.R.S. medals for the best individual blooms were awarded to Messrs. Dickson for Mildred Grant (H.P.). To Mr. J. Mattock, for Tea or Noisette, White Maman Cochet. In the corresponding classes for amateurs the Rev. R. Powley, with A. K. Williams (H.P.), and Mr. Conway Jones, with Niphotos, secured silver medals of the N.R.S.

Begonias, which form a section of the show, made a bright and pleasing display, both as plants and cut blooms. Needless to say, local growers won with the greatest ease and credit to themselves. Messrs. Blackmore and Langdon staged a large and rich display of single and double flowering plants, interspersed with Asparagus Sprengeri and bunches of cut Carnation blooms. Among named kinds we observed a monster bloom of Mrs. A. Hall, of a salmon shade; Frilled Beauty, pale salmon; Sophie, yellow, shaded blush; Mrs. G. F. Hodder, pink; Mrs. Portman Dalton, pink blush; Grand Duchess, salmon; Flambeau, orange; Catullus, crimson; Ida, a prettily frilled yellow, shaded salmon; and an unnamed but magnificent white were conspicuous among a host of others of high class.

Strawberries, for which Bath is famous, were as remarkable for their size, colour, and quantity as on many previous occasions. Mr. W. D. Porter, of Batheaston, won with six dishes, Royal Sovereign, President, Sir Joseph Paxton, and Latest of All being shown. Mr. Ricketts was second, and Mr. W. Vilven, Box Hill Gardens, Bath, third. The last named staged the most interesting because the most varied display. The new Laxton in this collection was the only representative of the variety on view, Trafalgar, Eleanor (fine), Sir J. Paxton, Fillbasket, and Royal Sovereign comprising the other kinds shown. With three dishes Messrs. J. and E. Ricketts and Mr. Vilven won with similar varieties of even larger size than in the preceding class, Climax being a distinct dish in the third prize lot. Royal Sovereign secured both first and second prizes in the single dishes, but they were distinctly dissimilar in colour, that from Mr. T. A. Ware being so much darker than those from Mr. Vilven, who was second, but both were handsome dishes of fine ripe berries.

The show is by no means limited to the title of the schedule—Rose, Begonia, and Strawberry—for a wealth of varied flowers and plants, artistically dressed tables, vases, bouquets, wild flowers, Sweet Peas, groups of plants, vegetables, stove and greenhouse plants and cut flowers, herbaceous flowers in large, bright bunches, all combined to please and interest and to cater for every taste. The bouquets of Roses were much admired, more especially those from Messrs. Perkins, of Coventry, who staged the six, and also the shower bouquets, in their well-known artistic style. Baskets of Roses, too proved an attractive feature, but in this Messrs. Perkins were placed second to Messrs. Walters, of Bath, certainly a compliment to the latter, which was probably not expected, though duly valued. Messrs. Cole and Son also successfully competed in these classes. Ideal weather, high-class music, good management, abundant tree shade, and a large and aristocratic attendance combined to make the Bath Floral Fête a popular and much enjoyed function, and deserving well of the painstaking secretaries, Messrs. Pearson and Jeffery.

Woodbridge, Ju'y 9th.

This excellent and enthusiastic society held its annual exhibition and fête this year in fresh grounds. For certainly over twenty—I am told nearer thirty—years it has been in the Abbey grounds belonging to Mr. Carthew. This year the Grange grounds belonging to Major Howey were occupied, and though farther from the station they seemed quite as suitable as the old site. The morning was hot, people could not be persuaded to take down the tent walls, and the arrangement of Roses was consequently again a toil and a trouble, instead of a pleasure.

In the open class, thirty-six Roses, for the handsome challenge cup, there were four exhibitors, and a troublesome and difficult task it was to decide between the two best stands. It was so close that the judges would certainly have awarded equal firsts

Mildred Grant as the medal Rose for best H.P. or H.T.—no doubt the best, but nothing out of the way—and a pretty good Mrs. J. Laing. Rev. A. Foster-Melliar second with Bessie Brown as perhaps his best; and Mr. F. Curtis third. Mr. Orpen was also first for twelve, showing a fine White Maman Cochet; and Mr. Foster-Melliar second with good Duc d'Orleans and Mamie; Mr. R. Steward was third. In six Teas, Mr. Foster-Melliar was first, with both Maman Cochets and Mrs. E. Mawley (good); Mr. Orpen second with a good Bride; and Mr. Steward third. In six Teas of a sort Mr. Orpen was first with White Maman Cochet, Mr. Curtis second with Maman Cochet, and Mr. Steward third, with Mrs. E. Mawley.

In the smaller and local classes, which were well patronised and showed here and there considerable promise, there was one extraordinary bloom which very easily took the Tea medal, and



Arrangement of Rhododendrons. (See page 52.)

if it had not been for the cup; as it was the first place was eventually given to Messrs. Harkness, who had a few extra fine flowers, among which were White Lady, Mildred Grant, and Duchesse de Morny. The stand which so nearly made a dead heat of it came from Messrs. Prior, and contained very fine samples of Frau Karl Druschki, Mildred Grant, Bessie Brown, and Maréchal Niel. Messrs. B. R. Cant were third with smaller flowers. In the open class for twenty-four, Messrs. Prior were first, having the same flowers extra good, as often happens; B. Cant was second, and Harkness third. In the open class for twelve Teas, Frank Cant and Co. were easily first, Messrs. Prior second, and B. Cant third. In Garden Roses, Frank Cant was again a good first, and B. Cant second, showing a fine bunch of the new Rose Mrs. B. R. Cant.

The heat soon took "all the goodness" out of the amateurs' weaker H.P.'s. For twenty-four, Mr. Orpen was first, with

was undoubtedly far and away the best Rose in the whole show. This was a Maman Cochet, shown by Dr. Pallett in a class for six. It was not only very large, but was completely and fully developed, a state of things seldom seen with the variety, as a more frequent exhibitor would no doubt have cut and shown it successfully in a half-open state. It had also evidently never been tied up, exposed to considerable heat, and kept quite dry and clean. It was by some distance the best specimen of the variety I ever saw, and am glad to state that it has been photographed, and I should recommend the N.R.S. to get a copy of it for their next catalogue.

I hope some other hand has sent some account of the other departments of this very fine horticultural show, as they appeared to be thoroughly worthy of the great reputation that Woodbridge Show has attained under the popular management of Mr. J. Andrews, the hon. secretary.—W. R. RAILLEM.

Ulverston Rose, July 10th.

The Ulverston Rose Show seems to become more popular each year, judging from the enormous attendance of fashionable visitors. Todbusk Park is quite an ideal place for a show. The committee know that for a long summer afternoon there must be something more provided than a view of the flowers, and they secure the services of the best musical bands they can get.

Turning to the exhibits, which were arranged in a fine marquee, some 210ft. by 30ft., Messrs. Alexander Dickson and Sons, Ltd., Newtownards, Co. Down (and Ledbury), staged some wonderful blooms in every open class, taking no fewer than fourteen first prizes, a gold medal for the best bloom in the show (with Mildred Grant), bronze medal for the best H.P. (Horace Vernet), and for the best new Rose with Countess of Annesley, a charming soft pink variety of splendid build. Their first prize stand of herbaceous plants was probably the finest ever staged at this season of the year, and was a tribute to the Emerald Isle.

For seventy-two distinct trusses they quite excelled themselves with blooms of Lady Clanmorris, Alice Lindsell, Mildred Grant, Mrs. Conway Jones (a lovely flower certain to become popular), Mrs. D. McKee (a rich new primrose H.T.), Ulster, Robert Scott, Helen Keller, Florence Pemberton, Mrs. W. J. Grant, Etienne Levet, Frau Karl Druschki, and five superb unnamed seedlings. For thirty-six distinct they scored again with a very heavy stand. H. V. Machin, Esq., for second place, had moderately sized flowers:

In the sixteen trebles, they had exceptional blooms of Frau Karl Druschki, Lady Derby (to be heard of later), Bessie Brown, Alice Graham, and Alice Lindsell. For eighteen distinct the same exhibitors led, having splendid flowers; H. V. Machin, Esq., came second. For twelve T's or N's, first A. Dickson and Sons, and for twelve new Roses, distinct, with an admirable stand, consisting of Gladys Harkness, Mildred Grant, Mrs. D. McKee, Alice Graham, Frau Karl Druschki, Countess of Annesley, Duchess of Portland, Robert Scott, Lady Derby, Duchess of Westminster, and a fine seedling. They had Mildred Grant in fine form for the best twelve light; Tom Wood was their best twelve darks; and Mrs. E. Mawley their twelve Teas. H. V. Machin, Esq., staged well in some of these classes.

The gold medal was awarded to the Irish firm for taking the highest points.

In the amateur section there were many very choice stands; in fact, a decided increase throughout, not to be wondered at considering the favourable prizes offered. The attraction in section B was the gold challenge cup, value fifteen guineas, and medal, for twelve blooms. This was won for the second time in succession by F. W. Tattersall, Esq., Morecambe, with a very rich coloured set of flowers; Mr. R. L. Garnett, Lancaster, a splendid second; and Rev. R. Langtree third. For eighteen distinct the Rev. R. T. Langtree scored a fine victory, as did J. H. Midgley, Esq., for twelve in trebles. The latter's stand of eighteen Teas or Noisettes was much admired. Messrs. Machin and Garnett followed closely. Bronze medals were given for the best single blooms, the varieties being Gustave Piganeau, Mrs. W. J. Grant, and Innocente Pirola, shown respectively by Messrs. Machin, R. L. Garnett, and H. E. Johnson.

There was a very spirited competition in classes for growers of less than 300 plants, a valuable cup (the gift of the Ulverston Urban Council) and N.R.S. silver medal, were offered for nine distinct, being handsomely won by F. J. Harrison, Esq., Ulverston; William Postlethwaite, Esq., and H. E. Johnson, Esq., winning in the remaining large classes.

Miss Nina Dickson, Newby Bridge, made a fine display with nine new Roses; whilst the Myles Woodburne challenge trophy and N.R.S. silver medal were secured by Mr. H. E. Johnson. Scarcely lacking in point of interest to the Roses were the Sweet Peas, which occupied almost all the side staging. The J. Towers Settle challenge trophy, value twenty guineas, to be held for twelve months, and a cash prize, brought out a fine array. The victory—a good one—rested with Mr. Mark Firth, Leicester, with splendid flowers. Mr. R. Bolton, Carnforth, was a smart second, and Messrs. Jones and Sons, Shrewsbury, close third. For twelve varieties, Mr. Firth left all comers; and for the challenge trophy, value ten guineas, given by the late Mr. Settle, and confined to local growers, Dr. Jackson, of Ulverston, distinguished himself. For twenty-four varieties of herbaceous plants, R. L. Garnett, Esq., staged superb bunches, colour and freshness standing out most prominently. J. H. Midgley, Esq., won for twelve varieties.

Stocks are largely cultivated in the Lake district, and never has it been my lot to see them so well grown; whether as plants or cut spikes there was the same high standard. Mrs. Atkinson won in three classes, and Mr. J. Sharp the remainder.

The trade added much to the beauty of the show. Messrs. Jones and Sons and R. Bolton staged large collections of all the finest Sweet Peas; Mawson and Son, Windermere, had a grand table of herbaceous and bulbous plants; Mr. Edwards, Notts, artistic table decorations; and Mr. J. Sharp, Stocks, and all received certificates. Another striking attraction was a group of admirably grown Malmaison Carnations from Mr. Fenner, gardener to Victor C. W. Cavendish, Esq., M.P., of Holker Hall,

Cork, who evidently understands their every requirement. Messrs. Mackereth, Ulverston, and Barron contributed handsome shower bouquets. The gate was a huge success, the takings amounting to over £200, a great tribute to the untiring energy of the joint hon. secretaries, Messrs. G. Mackereth and F. W. Poole, and their busy committee.—R. P. R.

Manchester, July 11th.

A brilliant exhibition of Roses was opened in the Botanical Gardens, Old Trafford, on Saturday last, and competition was great in every class. The leading one in the show was for sixty distinct kinds, no fewer than six competing, and the award fell to Messrs. R. Harkness and Co., Hitchen, for an extra fine collection. The striking varieties were White Maman Cochet, Ulster, Mildred Grant, Gustave Piganeau, Gladys Harkness, Dr. Andry, Mrs. W. J. Grant, La France de '89, Her Majesty, Bessie Brown, Niphetos, Papa Lambert, Mrs. J. Laing, Mdme. Hoste, Mrs. E. Mawley, Duchess of Portland, Countess of Caledon, Lady Mary Fitzwilliam, and Medea. Scarcely less excellent were the second prize set from Messrs. Alex. Dickson and Sons, which contained some exquisite new seedlings, notably Dr. Davison, a bloom of splendid texture and colour (dazzling scarlet, shaded deepest crimson); H.P. William Shean, a huge flower, deeper than Caroline Testout; and Dean Hole, a fine formed, pointed flower of a richer shade than Mrs. Mawley; also Mildred Grant, Mrs. D. McKee, Horace Vernet, Louis Van Houtte, Ernest Metz, and Mrs. W. J. Grant. The third went to Messrs. F. Cant and Co., Colchester, with somewhat uneven flowers.

No fewer than eight staged the thirty-six distinct, and here again R. Harkness led with a good all round stand, including Bessie Brown, Killarney, La France de '89, Ulster, Gladys Harkness, Lady Moyra Beauclerc, Papa Lambert, Frau Karl Druschki, and Jean Ducher being very prominent. In Messrs. Prior and Sons' second prize lot there were fine blooms of Tom Wood, Druschki, B. Brown, M. Grant, and Ben Cant. Messrs. Alex. Dickson and Sons were a close third.

There were five for twenty-four Teas or Noisettes, and the judges must have had much trouble. F. Cant and Co. led, and had Mrs. E. Mawley, Souvenir de Pierre Notting, and Jean Ducher; Mr. G. Prince was very close as second, his flowers being superb; Messrs. D. Prior and Son made an excellent third.

For the twelve Teas or Noisettes, the claims of Messrs. Prince and F. Cant were almost in the balance, but the former won. For twelve any white or yellow Rose, Mr. G. Prince, out of a dozen entries, won with magnificent White Maman Cochet; R. Harkness, second, with Frau Karl Druschki. Twelve any light coloured, A. Dickson and Sons with grand Mildred Grant; J. Townsend and Sons, second, with Bessie Brown; and for twelve dark coloured, the King's Acre Nurseries, Ltd., first with A. K. Williams; and Hugh Dickson and Sons with Hugh Dickson.

The silver medal for the best H.P. or H.T. went to Mildred Grant from A. Dickson and Sons. For the best Tea or Noisette, Mr. G. Prince with White Maman Cochet.

The amateur classes were worthy of the highest encomiums, and the first prize twenty-four from E. B. Lindsell, Esq., Brearton, Hitchen, were extra fine. Muriel Grahame, Gustave Piganeau, Horace Vernet, Alice Lindsell, Frau Karl Druschki, Dr. Andry, and Her Majesty, standing out faultless. The Rev. J. H. Pemberton had pretty blooms, but lacking in weight, for second, Druschki, Vernet, and Ulster being typical; and Conway Jones, Esq. (a new exhibitor who met with a warm reception on making his debut in Manchester, was a fine third.

The same merit was again to the fore in Mr. Lindsell's first twelve; R. Foley Hobbs, Esq., Thorneloc, Gloucester, second; and R. Park, Esq., Bedale, third, the latter also gaining the victory for twelve Teas or Noisettes; Mr. Conway Jones, Gloucester, was second. Nor was any mistake made by the latter in annexing the first prize for eighteen Teas or Noisettes with flowers of clear colour, fresh, and well blended. The best were Medea, Maman Cochet, Comtesse de Nadaillae, Innocente Pirola, and Souv. de S. A. Prince. Second (very good), R. Foley Hobbs, Esq.; and third, R. Park, Esq.

The best light coloured Rose was Bessie Brown from R. Park, Esq.; the best white or yellow, again Bessie Brown, from the Rev. J. H. Pemberton; and the best crimson, Gustave Piganeau, from the same gentleman.

The distinct grown Roses were not well represented, but great credit is due to C. Burgess, Esq., Knutsford, who saved the situation with exhibits which were highly creditable in every way, his scoring being for twelve and two sixes. R. Hall, Esq., followed in each case.

Four competed for twelve bunches of buttonhole Roses, Mr. J. Mattock winning with a clean lot of unnamed flowers; Mr. G. Prince second.

For a display of Roses it was difficult to see how Mr. J. Mattock won, the stand for third place from Mr. G. Prince being remarkably fine in every way, and strictly keeping to the wording of the schedule. Messrs. J. Townshend's Crimson Rambler was refreshing in the second stand.

The work of Messrs. Perkins and Sons is so well known that

comment is useless. They had a charming basket of three bouquets.

For the best collection of Sweet Peas, Mr. J. Derbyshire staged some magnificent flowers, and also won for the collection of twelve. Mr. T. Smith won for not less than twenty-five varieties. Messrs. Jones and Sons, Shrewsbury, staged a grand and effective collection of 100 vases of the most superior varieties, and were deservedly awarded a silver-gilt medal.

Messrs. Caldwell and Sons, Knutsford, had a very choice table of miscellaneous plants; Mr. J. Williamson, Stretford, a huge *Lilium auratum*; and *Violas* well set up from Messrs. W. L. Pattison and J. Pilling, Hyde.

The luncheon was attended by a large company, amongst whom were Alderman Gibson, J.P., in the chair, supported by Mr. Tait and James Brown, Esq., with Councillors Duckworth and Robinson, of Stretford. The usual loyal toasts over, Councillor Robinson, as chairman of the Stretford Urban Council, referred to the treaty which is about to take place for their Council to acquire and work the future of the gardens. He referred to the good work done, and stated that they were determined not to lose the gardens to the people of Manchester, and that with the helping hand they could give, he hoped to see future shows go on to greater prosperity. Messrs. Conway Jones, Prior, Rev. J. H. Pemberton, J. Brown, and R. Pinnington (for the Press), also spoke in support. To Mr. J. Brown, president, Mr. J. Weathers, and Mr. Paul, the thanks of all exhibitors is fully due for their courtesy.—R. P. R.

National Sweet Pea, July 15th and 16th.

For three weeks prior to the show, which we detail herewith, we learnt from Mr. Horace J. Wright, the honorary secretary, that entries were numerous, and the prospects bright for a good show. With the warmth and fulness of sunny days, and a moisture-laden soil, we have seen the Sweet Peas advancing at a rapid pace, till to-day they are, perhaps, absolutely at the crown of their perfection. Though frail and "thin," this lovely blossom furnishes a really charming exhibition en masse, and one might even say that when correctly staged, as Messrs. Jones and Sons, Dobbie and Co., or Henry Eckford stage it, no flower appears so light, elegant, graceful, or more pleasing. Of course, the common Cornflowers and the Shirley or Iceland Poppies vie with the Sweet Peas in some ways, yet the fragrant *Lathyrus* commands the greater respect. Times and again we have suggested the inclusion of the Poppy genus with the Sweet Pea, as fit material for the consideration of the grave and learned seigneurs who have undoubtedly assisted the trade in Sweet Peas, and cultivators towards a better knowledge of this flower; and it lies with the members to say whether or no they will broaden their platform. One can even dare to suggest that the Poppies are the more worthy subjects of study, and afford a much greater variety of interest. The exhibition this season—the third in sequence—was brought to a hall at Earl's Court, where the International Fire Exhibition furnishes one of the leading London attractions till next October. Visitors who entered by the Warwick Road portals had to pass the Sweet Pea show, which thus formed an extra feature of the Earl's Court season. Exhibitors, too, had the freedom of the fascinating gardens, and the halls and courts of the extensive grounds here, and if the Sweet Pea show continues to be held here, it is likely to increase in popularity when the venue becomes better known to gardeners.

Already the flower has attached to itself a number of almost exclusive devotees, just as the Rose, the Dahlia, Carnation, and Chrysanthemum have done, and we note the names of these in our report. The entries numbered roughly a thousand, and no other flowers (except some Crimson Rambler and other Roses) were seen. The first class on the schedule was for a collection of nineteen sorts, "to bring into prominence the finest varieties in the several colours." In all there were three dozen classes, and prizes were presented in the best of these by various trade firms, and by the officers and members of the society. The following is the prize list:—

CLASS 1, SPECIAL CLASSIFICATION CLASS (OPEN TO ALL).—The leader was Mr. C. W. Breadmore, 120, High Street, Winchester, with Coccinea, Hon. Mrs. Kenyon, Black Knight, Gracie Greenwood, Navy Blue, Dorothy Eckford, Geo. Gordon, Lottie Eckford, Miss Willmott, Prima Donna, America, Dorothy Tennant, Lord Rosebery, Duchess of Sutherland, Jeannie Gordon, Duke of Westminster, Princess of Wales, Salopian, and Lady Grisell Hamilton. The second place fell to Mr. Mark Firth, Wistow Hall, Leicester; third to Mr. A. G. Haryman (gardener, Mr. Acland), Apsford House, Frome; and fourth, E. W. King and Co., Coggeshall, with good flowers, but poorly staged. Surely if the flowers are worth trouble in culture, attention should be given to stage them to advantage.

CLASS 2, THIRTY-SIX BUNCHES.—Mr. Mark Firth here led with bright bunches, including Lord Rosebery, America, Agnes Johnson, Lady Mary Currie, Emily Eckford, Blanche Burpee, Countess of Radnor, Lottie Hutchins, Gorgeous, Navy Blue, Mrs. Eckford, Her Majesty, Jeannie Gordon, Shahzada, Monarch, Prince Edward of York, Gracie Greenwood, Lottie Eckford, Captain of the Blues, Salopian, Hon. Mrs. Kenyon, Triumph,

Colonist, Princess of Wales, Duchess of Sutherland, Lady Grisell Hamilton, Miss Willmott, Coccinea, Black Knight, Dorothy Eckford, Duke of Westminster, Countess Cadogan, Prince of Wales, Countess of Lathom, Lovely, and King Edward. Mr. Leonard Brown was second, Mr. Breadmore third, and E. W. King and Co. fourth.

CLASS 3, TWENTY-FOUR BUNCHES.—Messrs. Jones and Sons, Shrewsbury, were first, with a good set; Mr. Breadmore second; third Mr. Brown; and fourth E. W. King and Co.

CLASS 4, TWELVE BUNCHES.—Messrs. Jones and Sons, Shrewsbury, first, with good strong flowers; second, Mr. Breadmore; and third, E. W. King and Co.; the fourth falling to Mr. Leonard Brown, Brentwood.

CLASS 5 (TRADE EXCLUDED), THIRTY-SIX BUNCHES.—Mr. A. G. Hayman (gardener, Mr. F. Acland), Hapsford House, Frome, was first; Mr. G. H. Baxter (gardener, Mr. Holloway), Hutton Park, Brentford, second; and Mr. H. J. Michels (gardener, Mr. Hughes), Farleigh House, Kingston, third, out of four entries.

CLASS 6, TWENTY-FOUR BUNCHES.—Mr. A. F. Wootten, College Road, Epsom, first; Mr. Michels, second; Mr. R. Bathurst, third; and fourth, Mr. J. G. Ward, High Street, Brentwood.

CLASS 7, TWELVE BUNCHES.—There were eleven entries here, Mr. H. Aldersey leading; second, Mr. T. Lloyd Davies; third, Mr. H. J. Meyer, The Grange, Harlow; and fourth, Mark Firth, Wistow Hall, Leicester.

CLASS 8, NINE BUNCHES.—Mr. Aldersey, first; A. Steer, Royston Park, Pinner, second; Miss Beckford, Oxford House, Ham Common, third; and Mrs. Brewer, Suffield House, Richmond, fourth, out of seven entries.

CLASS 9, SIX BUNCHES.—Mrs. Brewer first; Mr. S. F. Jackson second; Miss Beckford third; and Mr. M. Y. Green fourth.

CLASSES 10 TO 28 (OPEN TO ALL), each for two bunches of Sweet Peas, in distinct colours. **WHITES.**—Mr. Breadmore led with Sadie Burpee and Dorothy Eckford; second, Hugh Aldersey, Chester; third, R. Bathurst, Tron Acton, Glos.

CRIMSON.—Mr. Breadmore first with Salopian and Mars; second, Miss Beckford, Ham Common; third, Mrs. F. Brewer, Richmond.

YELLOW AND BUFF.—Again Mr. Breadmore was first, with Hon. Mary Ormsby Gore and Hon. Mrs. Kenyon; second, Hugh Aldersey; third, F. Brewer.

PINK.—Mrs. F. Brewer led with Lovely and Prima Donna; second, Mr. T. Lloyd Davies, Park House, Addlestone; third, M. Y. Green, The Lodge, Eynsford.

ROSE AND CARMINE.—Mr. Breadmore first with Lord Rosebery and Prince of Wales; second, R. Bathurst; third, Mrs. F. Brewer.

MAUVE.—Mrs. Brewer, the varieties were Admiration and Dorothy Tennant; second, Mr. Breadmore.

BLUE.—Mr. Breadmore led with Countess Cadogan and Navy Blue; second, Mrs. F. Brewer; third, Mrs. A. Tigwell, Southall.

ORANGE.—Mr. Breadmore, with Miss Willmott and Lady Mary Currie; second, H. Aldersey; third, R. Bathurst.

BLUSH.—Mr. Breadmore, with Duchess of Sutherland and Modesty, beat Mr. H. J. Michels, Kingston.

PICOTEE-EDGED.—Hugh Aldersey, foremost with Maid of Honour and Golden Gate; second, Mr. Breadmore.

STRIPED AND FLAKED ROSE AND RED.—Mr. Breadmore, with America and Gaiety; second, Mrs. Brewer; third, H. Michels.

FLAKED BLUE AND PURPLE.—C. W. Breadmore, with Grey Friar and Princess of Wales; second, H. J. Michels.

BICOLOR.—Mr. Breadmore, with Triumph and Prince Edward of York; second, Mrs. F. Brewer; third, H. Aldersey.

VIOLET AND PURPLE.—Mr. Breadmore, with Duke of Westminster and Duke of Clarence; second, H. Aldersey; third, H. J. Michels.

MAROON AND BRONZE.—Mr. Breadmore, with Black Knight and Boreaton; second, Mrs. F. Brewer; third, Miss Beckford.

LAVENDER.—Mr. Breadmore, with Lady Grisell Hamilton and Lady Nina Balfour; second, H. Aldersey; third, H. J. Michels.

FANCY.—Mr. Breadmore, with Lottie Hutchins and Gracie Greenwood; second, Mr. T. Lloyd Davies; third, H. J. Michels.

MAGENTA.—Mr. Michels, with Captivation and Geo. Gordon; no other entry.

CERISE.—Mr. Breadmore, with Coccinea, two bunches; second, T. Lloyd Davies; third, H. J. Michels.

For two bunches of Everlasting Peas Miss A. F. Harwood led, and Mr. A. Taylor, East Finchley, second.

Miss C. J. Cole beat Jones and Sons for the wreath or cross, she having a wreath; and Jones a cross. For an epergne seven contested, and the honours fell thus: Miss C. J. Cole, Dorothy M. Oliver, Jones and Sons, and Adelaide F. Harrow, as named. For a basket arrangement Miss C. J. Cole was first, and Miss Harwood second. For a bouquet Jones and Sons beat Miss Harwood; and third, Miss C. J. Cole.

For a dinner table decoration (class 29), Mrs. Rapler, St. John's, Withdean, near Brighton, led; Earl Spencer (gardener Mr. Silas Cole), Althorp Park, Northampton, was second; Miss

M. M. West, Sutton, Surrey, third; and Mrs. Gentle, Little Gaddesden, fourth, out of eight entries.

Class 30 brought six tables, and Miss Cole was first, the others in order being Jones and Sons, Dorothy M. Oliver, Tollington Park, N.; and Adelaide F. Harwood, Colchester. The tables were all very tasteful.

NON-COMPETITIVE EXHIBITS came from Mr. Charles W. Breadmore, Sweet Pea specialist, Winchester, who had King Edward VII., Dora Breadmore (tea-pink), Dorothy Eckford, and all the best known and prized sorts.

Henry Eckford, of Wem, sent as usual, a lovely contribution staged to perfection, the newer varieties being Scarlet Gem, the finest Sweet Pea of its colour, a bold, strong, showy flower; King Edward VII., a large crimson; Mrs. W. Wright, purple-violet; Gracie Greenwood, and Dorothy Eckford.

Messrs. Cannell and Sons contributed a fine display, with the Cupid section in front. E. W. King and Co., of Coggeshall, Essex, who have "seven acres growing for seed," were also present; and Jones and Sons, of Shrewsbury, also set up a collection. Added to these were Hobbies, Ltd., Dereham, with a gorgeous selection of Roses, Carnations, and Sweet Peas; while Dobbie and Co., of Rothesay, had a select group of new sorts. Among these were Mrs. C. H. Curtis, pink; Florence Molyneux, a very good white, with purple flaking; Miss Willmott, Gracie Greenwood, American Queen, Jessie Cuthbertson, Dorothy Eckford, and Dainty.

MEDAL AWARDS.—The following medals were given for non-competitive displays: Large gold, Hobbies, Ltd.; gold, to Cannell and Sons and C. W. Breadmore; silver-gilt to H. Eckford, Dobbie and Co., and Robert Sydenham; large silver to Jones and Sons; silver to E. W. King and Co.

NEW VARIETIES.—The certificates had not been awarded when we left at two o'clock. The following seemed the most meritorious of the novelties:—

Bolton's Pink, from R. Bolton, of Walton, Carnforth.

Florence Molyneux, from Dobbie and Co. (see report).

Gladys Unwin, a wavy petalled, soft lilac-pink, from W. J. Unwin, Histon, Cambs.

King Edward VII., a grand scarlet-crimson, from Henry Eckford.

Miss Delia Spencer, a strong carmine-cerise, from Mr. Silas Cole.

Scarlet Gem, the finest of the set, from Henry Eckford.

Sheffield Floral and Horticultural.

At the monthly meeting of this society there was a good muster of members, and Mr. T. Lucas, of Ashgrove Gardens, gave a very interesting and lucid essay on the "Begonia," with special reference to Gloire de Lorraine. Amongst the exhibits were a splendid collection of cut blooms, some lovely Passifloras, and a grand piece of Dendrobium suavisimum carrying ninety-seven blooms, staged by Mr. Topham, gardener to Alderman J. Smith, for which a cultural certificate was awarded. The secretary announced the progress and prospects with regard to the annual show, and appealed to the members to use their efforts in making this a first-class exhibition. The Duke of Norfolk will open the show. The Lady Mary Howard, Lady Wilson, and Mrs. S. Wilson will judge children's vases and the bouquets; Mr. Nelson, of Chesterfield, and Mr. Wagg, of Ossington, will judge in the open classes; and the president, S. Roberts, Esq., M.P., will be supported at the opening by the Lord Mayor and the Master Cutler, so that a fashionable attendance is expected.

Liverpool Amateur Gardeners.

The usual monthly meeting was held in the Common Hall, Hackins Hey, on Thursday last, Mr. A. W. Ardran presiding over a numerous attendance, who listened with evident satisfaction to the paper entitled "Raising Crops and Plants," which was read by Mr. J. Stoney, gardener to F. H. Gossage, Esq., Camp Hill, Woolton. Mr. Stoney's remarks were admirably fitted to the taste of his audience, and in simple but most practical language he detailed the methods best suited to bring about the highest results, the audience at the close unanimously passing a hearty vote of thanks. The exhibits were more fully represented than usual, Miss Davies taking the prize for a very charming basket arranged for effect, also for the best spray of flowers, Mrs. Stevenson keeping up her reputation in the Fuchsia class. Mrs. Robins had good double Petunias, whilst Mrs. Paddock secured both Rose classes with good examples considering the season. Owing to the severe weather there were no Sweet Peas, but outdoor flowers were staged in good form by Mr. Wallace. Carnations from Mrs. Paddock, Zonal Pelargoniums from Mr. Hitchmough, a capital Begonia from Mr. A. Dodd, and a superior collection of miscellaneous cut blooms from Mr. Hitchmough completed a very fine display. Next month's show will be looked forward to with much interest owing to the numerous classes provided.—R. P. R.

Metropolitan Public Gardens Association.

Writing from 83, Lancaster Gate, W., the Earl of Meath encloses a copy of the latest report of the Metropolitan Public Gardens Association, of which he is the chairman, containing a special map of London showing the work since 1883. Lord Meath hopes that should the subject be of interest to readers of this journal some may feel disposed to become members of the association, or to contribute a donation to its funds. In the former case, the only liability is an annual subscription. The Association is much in need of help at the present time, as its income has been very adversely affected by the late war and other allied causes. That branch of the work of the association which deals with the provision and laying out of public gardens and playgrounds in poor and crowded districts brings health and happiness to the inhabitants, and tends to beautify their dull surroundings. It also affords employment, especially during the winter months, to deserving men, who might otherwise be out of work. The association has many useful schemes on hand which it is ready to carry out if sufficient funds are forthcoming.

East Anglian Horticultural Club.

The monthly meeting of the East Anglian Horticultural Club was held on the 8th inst. at the Shirehall Hotel, Norwich, when Mr. Geo. Davison, The Gardens, Westwick House, gave an interesting address on herbaceous plants, and showed in connection therewith a magnificent collection of cut flowers. A very fine collection of Marguerites (six varieties) and Poppies was shown by Mr. Holmes, of Tuckswood Farm. The winners of the monthly competitions were Messrs. Chettleburgh, G. Moore, C. H. Hines, C. Matthews, G. Elsey, S. Hunt, C. Burtenshaw, F. Williams, A. Craddock, E. C. Ramus, D. Howlett, T. Notley, Rush, Fox, and Palmer. There was only one entry for the prize presented by Mr. E. Peake, for the best collection of six wild flowers, correctly named, and the first prize was awarded Mr. H. B. Dobbie. With regard to the Boardman silver flower bowl competition, Mr. C. H. Hines was awarded twenty-one points, and Mr. F. Carrington sixteen points for six bunches of annuals. The bowl is competed for by single-handed gardeners and the amateur section of members, and the competitor securing the greatest number of points at the end of the year secures the prize. Mr. J. E. Barnes' prizes for the three best specimens of Barnes' Giant White Cos Lettuce were taken by Mr. F. Carrington and Mr. D. Howlett, and points were awarded Messrs. C. H. Hines, W. Rush, C. Matthews, C. Burtenshaw, and A. Craddock in the competition for the silver flower bowl presented by Mr. Tillett, which has to be won two years in succession to become the absolute property of the exhibitor.

Devon Gardeners'.

The annual outing of the Devon and Exeter Gardeners' Association to Ilfracombe took place on July 8, which was a charming day. How we enjoyed ourselves ourselves at Ilfracombe-cum-Berry! Mr. James Turner, the head gardener, showed the excursionists over the grounds. Then Mr. Basset and his son-in-law, Captain Curzon, were at the gymkhana at Barnstaple, but Mrs. Basset gave the party a welcome through the hon. secretary (Mr. Andrew Hope) and the hon. treasurer (Mr. Mackay), who shepherded their large flock throughout the day. Standing on the top of a battlemented wall Mrs. Basset said, "I wish you all a very pleasant day," and a hearty cheer was given in acknowledgment. The hilly nature of North Devon afforded capital sights to the party, and some of the local tints and far distance scenes were commented on by Mr. Turner. Mrs. Curzon accompanied the visitors, showing with zest everything worth noting, for she is a great gardener. Mrs. Curzon and the head gardener are transforming an old sheltered fruit and vegetable garden, sloping to the stream and pond, into a beautiful pleasure. The party passed on to an ornamental series of terraces, among which were two of the finest specimens in the county of the nobilis variety of bamboo (Phyllostachys), throwing up their clusters of slender stems from an islet in the midst of a pond dotted with Water Lilies. Japanese Maples and many fine things were noted. After visiting Combemartin and Berryarbor (the latter place a delightful study for artists), Mrs. Basset's guests made a happy return to what they call the "ever faithful" city of Exeter about 10.30 p.m.—X.

R.H.S. of Ireland.

The Rose show at the Pavilion, Kingstown, was quite a new departure of the Council of the Royal Horticultural Society of Ireland, one, we should say, which would become popular, as it would be independent of weather, there being ample space inside to exhibit the flowers to perfection. It was not a very good show of Roses, if quantity was desired, as the weather was against them everywhere, but the few that were exhibited were, indeed, very lovely and perfect. Messrs. Dickson, of New-

towards and Dublin, took first prize and many others. Messrs. Ramsay had some charming plants and hardy annuals. Hogg and Robertson had their usual fine show of Irises and other bulbous plants that take up the running at Rush when the Tulips are things of the past. Lord Plunket again sent a splendid show of herbaceous plants, which at all seasons of the year form one of the delights of the Old Connaught Gardens.

Co-operative Flower Show, Crystal Palace, July 11th.

The Agricultural and Horticultural Association having in 1902 abandoned the large flower show they had been in the habit of holding at the Crystal Palace for several years in connection with the festival of the National Co-operative Society, the organisers of the festival arranged one on quite a small scale last year; and this year they considerably extended it, and three of the Egyptian courts were filled with exhibits generally of a highly satisfactory character. Mr. Henry Vivian was the chairman, and Mr. George Morriss the secretary; and a body of assistants, with Mr. George Castleton at their head, arranged the exhibits in due order. Judging was got through early, and the flower show courts were visited by thousands of interested co-operators from all parts of the country. It is the intention of the promoters to extend this exhibition in the future, and it is not improbable that in the course of two or three years it will attain to former dimensions.

The schedule of prizes of sixty-two classes was divided into three sections; the first section open to all comers; the second to professional gardeners and members of co-operative societies; and the third section also to members not professional gardeners. While there was nothing particularly striking, the general average was decidedly good. Among plants, Zonal Pelargoniums (double and single), Fuchsias, Petunias, Coleus, Musk—represented by finely grown and flowered plants of Harrison's, and annuals were all creditable; in the case of the latter, Calliopsis coronata, the lavender-blue Convolvulus minor, dwarf Schizanthus, and Mignonette were among the best.

Cut flowers included Sweet Peas, which were numerous and in some instances finely shown. Roses, some decidedly good; annuals and hardy flowers in bunches, and various floral decorations. Fruit was shown by professional gardeners; there were good Strawberries and Currants; while vegetables were shown in collections and dishes, some of them particularly good. Special prizes were offered for flowers and vegetables by various branch co-operative societies.

A large collection of flowers, &c., was shown by Messrs. J. Cheal and Sons, nurserymen, Crawley, and from Smith's Nurseries, Crown Hill, Upper Norwood, to both of which a Co-operative Festival certificate of merit was awarded. Mr. W. J. Unwin, florist, Heston, Cambs, exhibited a number of sprays of his new Sweet Pea Gladys Unwin, a flower of excellent parts, which may be popularly described as a pink Miss Willmott. It was awarded a certificate of merit for its undoubted good qualities.

Scottish Horticultural.

The monthly meeting of this association was held in Dowell's Rooms on the evening of Tuesday, the 7th inst., Mr. McHattie, president, in the chair. There were a large number of members present; a number of new members were elected. Mr. Dick, Champfleurie, furnished a paper, which was read by the secretary, on "My Favourite Flowers, and Soils that Suit Them." Mr. Dick's paper was well written, though rather discursive in its nature. Mr. Dick dealt shortly but lucidly on a great variety of flowers and plants, such as the Rose, Lily, Rhododendron, Cyclamen, Eucharis, Lilac, Cratægus, &c., making short cultural remarks on each. An interesting discussion followed, and a hearty vote of thanks was awarded to Mr. Dick.

The exhibition table was gay with a large number of interesting subjects. Messrs. Dickson and Co. sent a number of nice plants of Kalanchoe flammula, for which a certificate of merit was awarded. Mr. John Downie, Beech Hill Nurseries, exhibited a handsome vase of double white Rocket in fine robust form. Messrs. Todd and Co., Shandwick Place, sent a beautiful vase of perpetual blooming Carnations, among them being Cambridge White, Royalty, Dazzler, and Madame Melba, a beautiful pink. These were remarkable for decorative value and splendid long stems. Mr. Kidd, The Gardens, Carberry Tower, exhibited a splendid vase of pink Malmaison Carnations, the rich scarlet Mrs. E. Hambro', and crimson Uriah Pike. These were really very fine specimens of high cultivation, and were deservedly awarded a cultural certificate. Messrs. Grieve and Sons, Redbraes Nurseries, had a nice exhibit of fancy Pansies and bronze shaded Violas; also a number of beautiful hardy flowers. Nice blooms of Brugmansia were sent by Mr. Comfort, Broomfield Gardens. A pair of well grown Gloxinias were sent from Mr. Waldie Lamont, Colinton Road, which were awarded a cultural certificate.

On the motion of the president it was agreed to send a formal vote of thanks to Mr. Stewart Clark, of Dundas Castle, for his great kindness and hospitality on the occasion of their visit to his beautiful gardens and grounds.



Fruit Forcing.

VINES: IN POTS FOR EARLY FORCING.—The canes for starting the first week in November, to ripen the fruit in March or early in April, should by this time have completed their growth, and must not have any more water than will prevent the foliage from becoming limp. Expose fully to light and air, so as to thoroughly ripen the wood and the buds. If the laterals have been allowed to extend with a view to thickening the cane, they must be brought back gradually by cutting away part at a time, reducing each by degrees to one leaf. The Vines should be kept free from insects, syringing occasionally if red spider appear, for it is important that the leaves perform their functions. When the wood becomes brown and hard, place the Vines on a board or slates in front of a south wall, securing the canes to the surface to prevent the foliage being damaged by wind. Afford water only to prevent the leaves flagging, cut away the laterals close to the cane, and in a few days shorten the cane to the length required. The principal leaves must not be injured, but left to die off naturally. The best varieties for early forcing are White Frontignan, Foster's Seedling, Black Hamburgh, and Madresfield Court.

Later Vines in pots should be encouraged to make a good growth and perfect it, also exposed to all the light and air possible. They must not be over-watered, nor neglected for due supplies of water or liquid manure. Cut-backs are much the best for early forcing, as the Vines make an earlier and sturdier growth and perfect it sooner than those raised from eyes in the early spring. This is important, for the Vines have more rest, more stored matter, and start with greater regularity.

EARLY FORCED PLANTED-OUT VINES.—It is not advisable to force Vines year after year to ripen their crops before May or June, and houses which are started in December or at the new year to afford Grapes at the time mentioned for table or marketing respectively are best planted with varieties that ripen together, the structure being only of sufficient size to admit of a supply of ripe fruit for a period of not more than six to eight weeks. This is as long as black Grapes will hang under a May, June, and July sun without turning red, or white Grapes from becoming brown on the exposed side of the bunches, even when a slight shade is afforded from sun. Such arrangement admits of the foliage being cleansed with water from a syringe or engine, but when there are late as well as early varieties in the same house the dry atmosphere that must be maintained on their account when the Grapes are ripening causes red spider to increase on the foliage, and this is very disastrous to present and future crops of Grapes.

Early Vines that ripened their crops in May or early in June will soon be cleared of Grapes. They should be thoroughly cleansed, employing an insecticide if necessary, and the foliage be preserved in health as long as possible by occasional syringing, full ventilation constantly, and due supplies of water or liquid manure at the roots.

MUSCATS RIPENING.—Unless the season is exceptionally fine, and the Vines started early, Muscats require fire heat to ensure their perfect maturation, even when ripening at the hottest part of the year. The time taken by Muscat of Alexandria to ripen is not less than six to eight weeks from commencing to colour, especially when the Vines are in vigorous health. Perfect finish in extra fine Grapes is not had for some time longer; they require time, with assistance from fire heat, so as to secure a night temperature of 65deg to 70deg, 75deg to 85deg by day up to 90deg or more, with abundance of air. A rather dry atmosphere is essential to attaining that golden hue characteristic of rich and full Muscat flavour. This is secured by free ventilation, a little constantly, but the atmosphere must not become arid, damping down occasionally. In large houses the moisture arising from the border is enough except in hot weather, then the paths and borders should be damped daily. Too much moisture is fatal to Muscats when ripening, causing them to "spot," therefore it is necessary to have a gentle warmth in the hot water pipes, and a little air constantly to prevent the deposition of moisture on the berries. Abundant supplies of water must be given to the roots, for when there is a deficiency of moisture the Grapes shrivel. On the other hand, excessive supplies, so as to make the soil sodden and sour, results in shanking of the berries. Needless waterings, therefore, should be avoided, also dribbles, mere wetting of the surface, very ineffective, doing quite as much harm as good, besides being deceptive of the right indication of the soil beneath as regards moisture.

YOUNG VINES.—Canes planted this season should, provided they are to be cut down to the bottom of the trellis, leaving

three buds there for the continuation of the rod and two shoots for bearing next year, be allowed to grow unchecked, so as to secure a good root formation and sturdy stems. Any Vines intended for producing full crops next season on the extent considered sufficiently stout in rod should have the laterals issuing from the side of the buds to which they are to be shortened, stopped to one leaf, and the principal leaves kept free of growths. If permanent Vines the cane need not be stopped till it has grown to the top of the house, cutting back at the winter pruning to three good buds from the bottom of the rafter or trellis, and only allowing the side growths to bear each a bunch of Grapes in the second year to prove the variety, taking the leading growth forward without cropping. Supernumeraries intended for next year's bearing and then to be removed should be stopped at a length of 7ft to 9ft, pinching the laterals to one leaf and sub-laterals in like manner. These ought to be shortened in September, and by degrees cut away close to the cane, and in a fortnight afterwards the Vines should be pruned to the first plump bud below the first stopping, leaving the old leaves to die off naturally. Thorough ripening of the wood is important, a free circulation of air being necessary, with fire heat if the weather be cold and wet.—ST. ALBANS.

Kitchen Garden.

OUTDOOR TOMATOES.—Growth is now strong and active, and the flower trusses are being produced freely and in succession on the main stem. If all goes well with the plants the pollen should be liberally produced as the blooms fully open. A slight shake or movement of the blooms will distribute the pollen readily in the middle of the day, and there will naturally follow a free setting of fruit which, under favourable conditions, will readily swell. It is at this time that constant attention is required. The water supply must be regular, so that the roots do not suffer, or the flowers will be likely to drop, and probably the fruit, soon after it has set. Serious checks are often given to the plants by the water supply being ineffective. On the other hand, too much water must be avoided. Another matter to guard against is allowing superfluous growths to remain, which crowd and destroy the chances of a prolific condition. Commence with and continue to train the plants to one stem. When a fair amount of fruit has been secured small doses of liquid manure may be afforded to assist in swelling the fruit, and maintaining the general vigour. It is, of course, an essential of success that Tomatoes should only be planted where they are fully exposed to sun and air.

MELONS IN FRAMES.—Air, light, and warmth are the chief requirements of Melon plants, together with adequate moisture at the roots. The latter may be mainly secured by planting in a good holding soil which does not, of course, retain water too long. Warmth in the early stages must be maintained either by fermenting material or by hot water pipes running round the frame inside. Sun heat must be largely utilised, too, in frame culture, closing early in the afternoon to have the benefit of it, but judgment must be used at this season. In a sunny position there will always be plenty of light, while air may be given in sufficient quantity by regulating the lights of the frame. Train the growths thinly, whereby they will develop substance and be short jointed, with leaves of corresponding quality. Fruits form on short side growths, and the aim must be to have a certain number of blooms opening at one time, fertilising them all on the same day. The fruits setting will then swell together, and be equal in size, or it may be possible from the number set to select a limited quantity equal in size. All others should be removed, and the selected ones encouraged to grow freely. Stop the shoots at a joint or two beyond the fruits. Give air early in the day according to the weather. The water supplied to the roots must be given at the same temperature as the frame. As the fruits swell to a good size, place them on a square base of wood, and as they become larger, elevate them close to the glass. A space of several inches immediately round the main stems is best kept dry, so as to avert an attack of canker. If signs of it do occur rub in quicklime or fine charcoal.

PLANTING WINTER GREENS.—The principal crops of Borecole, Savoys, autumn Cabbage should now be planted. If inserted in dry weather water or liquid manure must be given them. The rows ought not to be less than 2ft. apart, and the plants 15in. to 18in. Some good reliable varieties of Broccoli ought also to be planted, choosing for them a plot of firm ground. Holes may have to be made with a crowbar to insert the plants, but they often make just the right sort of growth which will pass through the winter well. In order to assist in well establishing all winter greens, run the flat hoe between the rows frequently.

LETTUCE.—Cos Lettuces, which are approaching a full-grown condition, may have the leaves tied together in dry weather, so as to well enclose the hearts, and assist their blanching. Thin out seedlings. Further sowings should be made in watered drills. The earlier Lettuces which have commenced to run to seed ought to be pulled up without delay, their continuance impoverishing the ground.—EAST KENT.

THE BEE-KEEPER.

Autumn Stimulation.

During favourable seasons it invariably happens that the queen of a colony is stimulated to such an extent by the ingathering of honey and pollen as to completely occupy all the bars in the brood chamber with eggs and brood in all stages, to the exclusion of the honey, and the bees are therefore compelled to find room for the storage of the latter in the upper portions of the hive. Now, when it is remembered that the harvest is seldom of more than a fortnight's duration it will be evident that if the stock hive is full of brood at the beginning of the honey flow, it will from the same cause certainly remain so through the whole of the harvest, consequently the supers rapidly become filled, and the colony is considered an excellent one. When, however, the supers are removed, which does not usually take place until the season is over and the last pound of honey stored, what is to become of the bees so closely robbed of their surplus stores?

With the cessation of the harvest there will obviously be a diminished income, and the large quantity of the brood and bees, with their innumerable wants, will soon be reduced to a pitiable condition through the inadequacy of their food supply, causing many bees to perish through useless flights in search of food, in addition to the loss of the brood, which is cast out of the hive in times of scarcity. This state of things can be prevented by gentle, continuous feeding in the early autumn, which stimulates the queen, bringing out her best egg laying qualities.

The continuance of ovipositing is to the ultimate benefit of the stock and the apiarist, as it secures a considerable addition to the number of eggs, and as the brood which is already in the hive is also brought to maturity, there is a population of young bees for the winter. Breeding is discontinued naturally only through cold, wet weather, or when the income is very sparse; but no matter when the harvest ends, stimulative feeding should commence when the supers are removed, and should cease not later than the beginning of September, as should cold weather ensue the brood in the hive would run great risk of being chilled, and the bees would then be in a worse condition than before, through performing useless labour in connection with the brood. If stocks have been neglected, and breeding long discontinued, they cannot have too much attention paid to them.

Stimulative feeding should be resorted to at the earliest possible moment to promote breeding. There is another advantage in this method of feeding as soon as the supers are removed—that is, any excess of food is stored, and will be put into its natural position and properly sealed up without an undue proportion of moisture, which almost invariably happens when stocks have been fed up too rapidly late in the autumn. There is nothing gained by procrastination late in the season. As soon as the surplus is taken off, put on rapid feeders if short of food, and afterwards substitute slow ones, which should contain little more than what is actually required for the daily wants of the bees. This will have a stimulative effect, and will at the same gradually feed up for winter. It is becoming more and more widely appreciated that the maximum efficiency of colonies during the following season is only obtained by taking into account all the varied operations the previous autumn.

Plenty of bees must be secured for winter, which, apart from the work they accomplish in building up strength in the early part of the year, also effect an economy of stores, as the more numerous the inhabitants of the hive the better are they able to maintain the necessary heat during the cold months, without the increased consumption of food and mortality which numerical weakness entails. This again results in spring feeding to a great extent being obviated. Food is never lost.—E. E., Sandbach.

Stray Thoughts on Hives.

When people only used straw skeps, they imagined that the oftener bees swarmed, the better their colonies were prospering. Unfortunately this idea still lives in outlying country districts, even in these enlightened days. Some of the more thoughtful of the above used to raise the hives, and do now, and let the bees work down into the lower chamber, and when the busy insects had left the upper hive, this sometimes seemed to check swarming. When bar-framed hives became known, it was said that, by giving more room above, by placing super above super, the bees had been deprived of their desire to swarm. Those who placed their whole faith in this doctrine know how far it came short of their hopes. Other hives were invented, all non-swarming, with no warranty, though, with room on the sides, but these proved only worse than the others.

Last year I had the good fortune to watch a double hive, something like a "Wells," which seems to have attained the object most bee-keepers have in view, viz., the prevention of swarming. As my observations only extend over one season, I could not undertake to say that it is absolutely a non-swarming hive, but it did not swarm last year, and the take for the year was phenomenal, considering the season, and far in advance of the

takes from other hives in the neighbourhood. The patentee, Mr. Geary, warrants this to be a non-swarming hive, and without a doubt it is far better than any other hive I have had an opportunity of observing, and well worth a trial.—HYBLA.

When to put on Supers.

One is constantly being asked, When ought I to place supers on my hives? This question seems a very simple one, but only general rules can be laid down for their guidance. Most people imagine that we have only to place on these supers and they are sure to be filled, but at the end of the season they tell a very different tale. They have learned something by experience, and the school of experience is perhaps the best of schools in which to learn. Note first the main source from which the honey is obtained. In one district it may be fruit, in others mustard, turnips, clover, lime trees or heather. Having settled this point, get the hives ready for the season; this means you must commence operations at least six weeks before. Then, when you see the white wax near the top bars put on the queen excluder and sections, wrap up well, and hope for the best. During a good season it is quite possible to have twenty-one sections filled in seven days. A friend of mine told me that he had sections filled in this period once, and they were the prettiest he had ever seen. Still, knowing this, don't be surprised if they take longer.

It may not be out of place to give a hint or two on the preparation of sections. Procure some boiling water and a small paint brush. Wet all the joints well, twenty-one sections at a time, placing them one on the other. When all of them have been well wetted, turn over the pile, and the first one operated on will be well soaked. It is best to use whole sheets of foundation. Many use only starters, but this is false economy. It takes the bees longer to complete their work, and the sections are rarely so well filled. Some time ago a lady bee-keeper remarked on well filled sections, and when told how they were secured, replied, "I cannot lower myself to do that, for the bees in time will lose the art of comb building."—HYBLA.



* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

SWEET PEAS FUNGOID (C. M. H.).—My Sweet Peas have suffered during the last two years, but this year they are worse than ever. A large proportion of seeds have never come up, and if they survive to flowering time the blossoms are deformed and blurred in colour; the leaves yellow and curled up. I shall be grateful for any information.

[The Sweet Pea plants are affected in the leaves and stems by the Pea spot, *Ascochyta pisi*, a parasitic fungus that causes pale spots on the leaves, stems, and even pods of cultivated Peas (*Pisum sativum*), Haricot Beans (*Phaseolus vulgaris*), Everlasting Pea (*Lathyrus sylvestris platyphyllus*, syn. *L. latifolius*), Sweet Pea (*L. odoratus*), and species of *Vicia* and *Cercis*. It forms pallid spots of a somewhat rounded or oval form on the leaves, and these quickly dry up and leave nothing but the stems on young plants, and greatly prejudice the growth of older plants so that they do not flower satisfactorily; indeed, the petals are affected, being more or less disfigured by pale dead spots, and sometimes they do not open, but shrivel up in the bud, seeding being very indifferent, and sometimes not any pods are formed. The parasite also attacks the stems, seldom below the surface of the ground, and then the part of the plant above the point of infection commonly collapses, drying up and withering of a pale colour. It is, however, most disastrous to the leaves, these having the pale spots, and the whole leaf or leaflet dries up of a pale colour. On the pale spots appear minute dark points or dots, though not always in the case of leaves that quickly shrivel. These dark bodies are the conceptacles of the fungus, and from these are discharged, when mature, the spores of the parasite by means of which the disease is spread, and the diseased leaves or stems also carry over the disease from year to year by means of perithecia that form in them during their dried state. Diseased portions, therefore, should be burned. No preventive means against this pest have been recorded. Probably spraying with dilute Bordeaux mixture or potassium sulphide solution, 1oz of the sulphide being dissolved in about a quart of hot water, and when dissolved adding 2½ gals of soft water, in which 1oz of soft-soap has been meanwhile dissolved, thus making 2½ gals of solution, when well mixed and cool, is ready for use. Spraying should

commence as soon as the plants appear above ground, and be repeated at intervals of ten days or a fortnight, so as to coat the leafage as made with the finest possible film of the solution. We did not find any trace of disease on the roots, though the cuticular tissues had become brown in some cases, and there was no evidence of eelworm in the root stem. Possibly the disease may go over in the seed, as it affects the pods and probably the seed, as you mention that some of the Peas never come up, for which, however, the seedsmen are not responsible, only in that they should be careful to save seed only from healthy plants. The Sweet Sultan also had the foliage shrivelled up, and appears affected by a similar disease, but we did not discover the fruits of the fungus, which are essential for definite identification. The soil appears deficient in lime, otherwise of a nature calculated to grow Peas and other crops satisfactorily. As there was trace of "sleeping disease" in the Sweet Sultan root stem, we advise the ground to be dressed in the autumn, or some time in advance of cropping, with a mixture of eight parts basic cinder phosphate and three parts kainit, applying 1lb. of the mixture per square yard, and digging in, taking small spits so as to mix evenly with the soil. In the spring, or before sowing or planting, again fork over the ground, and probably you will not be troubled with the collapse of either the Sweet Peas or the Sweet Sultan plants.]

DWARF CHRYSANTHEMUMS (S. W.).—Sturdy, healthy cuttings grown in the full sun, inserted now in small pots of sandy soil, stood on damp ashes in a frame, kept moist, close, and shaded to prevent the leaves flagging, strike readily, and the plants are often very serviceable for various decorative purposes. The cuttings and young plants cannot have too much light and air consistent with keeping the foliage fresh. Thousands of dwarf plants of pompon varieties are raised from cuttings inserted in July and August.

BOOK ON FORESTRY (Geo. S.).—We are not acquainted with the book you name, and cannot say where a copy is obtainable. You might write, stating your wants, and asking for a catalogue of their books, to either of the following: Wesley and Son, Essex Street, Strand, W.C.; or Morgan and Co., 8, St. Mary-at-Hill, E.C. We can recommend to your notice "The New Forestry," by J. Simpson, 2s. 6d. (Pawson and Brailsford, Sheffield), as a good, suggestive work. You will find occasional forestry work in our own columns, also in the "Gardeners' Chronicle," London; "The Garden," London; "North British Agriculturist," Edinburgh; "The Field," "Flora and Sylva" (2s. 6d. monthly), and other periodicals. We do not know a journal of forestry. There was a Scottish arboricultural paper, but it failed.

VARIETIES OF BLACK HAMBURGH GRAPE (W. A.).—The best variety of Black Hamburgh is undoubtedly Mill Hill, which has the fine appearance of Dutch Hamburgh, but without the coarseness and hollowness at the centre that characterises that form, and the quality is equal to that of the Black Hamburgh; the latter is, however, excellent, and as a rule grows better than the Mill Hill. By planting the Vines now you will take time by the forelock—i.e., get them established, and they will be in a condition to make a good start when the house is closed in February. It is only a question of shading until the Vines recover from the partial disentangling and spreading out of the roots in the fresh material, afterwards exposing the growth fully to light so as to get the wood ripe. Cut hard back, and they will start well with the other Vines. It would be preferable to plant at once than defer it until the house is started in February.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1903. July.										
Sunday ... 5	S.W.	deg. 59.4	deg. 55.8	deg. 70.5	deg. 55.7	Ins. —	deg. 64.7	deg. 61.8	deg. 57.0	deg. 53.5
Monday ... 6	N.W.	58.4	55.0	65.2	55.7	—	64.2	61.7	57.2	54.6
Tuesday ... 7	N.N.W.	56.2	53.3	65.9	46.3	—	62.2	61.3	57.4	40.7
Wednesday ... 8	N.N.W.	60.2	56.0	72.5	43.0	—	61.2	60.8	57.6	31.0
Thursday ... 9	N.W.	71.7	67.2	77.2	60.0	—	64.0	60.8	57.6	61.4
Friday ... 10	S.W.	73.7	68.5	84.4	58.9	—	65.2	61.2	57.6	50.7
Saturday 11	S.W.	76.6	70.0	85.2	57.9	—	66.6	62.0	57.7	49.5
MEANS ...		65.2	60.8	74.4	53.9	Total. —	64.0	61.4	57.4	48.8

Fine warm weather, with a rising temperature towards the end of the week, Saturday being the hottest day since August 10, 1901, which was exactly the same—viz., 85.2deg.



Fiscal Policy: The New Departure.

Before expressing our opinion on the new fiscal question raised by Mr. Chamberlain, we must disclaim any political bias, at least so far as party politics are concerned. There is such an enormous difference between the policy which governs a party and the policy wherewith the same party governs the country, that we may reasonably ask, What is the real meaning of the word "political?" What are politics? With regard to agriculture and its interests, we are afraid politics are a game in which those interests take the form of the shuttlecock, which is kept rising and falling at the will of the player, but is much more frequently down than aloft. Well, the fiscal suggestions are before the country as a political question, and with Mr. Editor's permission, we propose to shortly discuss their probable effects in relation with agriculture.

Opponents of Mr. Chamberlain's suggestion are raising a cry against taxes on food, and probably a number of farmers are secretly rejoicing at the prospect of obtaining more for their produce, and the price of Wheat is the point in which they take the greatest interest. The price of Wheat represents the price of bread, not quite exactly, but nearly enough for purposes of argument, and it is absolutely absurd to suppose that the electorate of this country will sanction any artificial enhancement of the price of the loaf. If Mr. Chamberlain's suggestions should be worked out in practice, though Wheat might be taxed, the impost could only be a small one, at any rate until our colonies should be in a position to supply the greater part of our deficiency of bread stuffs.

The farmer who hopes for the imposition of protective tariffs sufficient to revive British Wheat production, is living in a fool's paradise. The people who argue that we can produce Wheat sufficient for home necessities are only talking nonsense. It can be done; but not as a paying transaction. We could produce the Wheat if it would pay to do so, but the crop requires more field room than our England can supply, and it does not under modern conditions employ very much labour. As towns increase in size and number the purely agricultural area of the country must decrease, and any artificial stimulus to the production of cereal crops is really not to be desired, either from the standpoint of the general or of the agricultural interest. We are by no means sure that Mr. Chamberlain has in mind any serious imposts on imported cereals. The proposal is to investigate the whole question of imports with a view to rearrangement of import duties. It is reasonable to suppose that duties on tea and sugar, which fall entirely on the consumer, may be reduced, and imposts placed on imported manufactured articles which compete with home productions.

If we follow the common-sense plan of taxing articles in proportion as we can produce them at home or not, then Wheat would be one of those most lightly taxed, for we do not produce one-fourth of our requirements. And it is the same with Barley and Oats, though in lesser degree. How could the live stock of this country be fed if there were no imports of Barley, Oats, and similar feeding stuffs? We cannot produce a sufficient supply of brewing materials even, and it would be suicidal to impose duties which would be in the least degree prohibitive. Of course, the point of the whole proposal is the giving a preference to our colonies and if anything should come of it there can be no doubt that Canada would be one of the chief gainers, for

her climate is suitable for the growth of Barley and Oats as well as of Wheat, and no doubt if she had sufficient encouragement she could enormously increase her export of all three cereals.

Will Bradford agree to import duties on wool, the raw material of her industry? If wool be taxed there is no doubt that it will benefit the British farmer, and the price of wool is now so wretched that he deserves all the help he can get from this quarter. The preferential tariff would greatly encourage Australian sheep owners by giving them an advantage over their Argentine rivals. By encouraging sheep-breeding, however, it might also give a fillip to the frozen mutton trade, whilst the Argentine demand for pure bred rams might be expected to show a decline.

There is another corner of this subject that may readily become a very important one when every point has been well and fairly considered. Politicians of all creeds are agreed as to the extreme desirability of retaining our rural population, and none will dissent from us when we say that the land to be more productive needs more labour, more manure, and higher cultivation altogether. As our arable fields become restricted it is necessary that they should receive more forcing treatment. But how is it to be done? From whence are we to get the needed stimulus? From Mr. Chamberlain's new idea, if it should be carried into effect. It would be taxing food, and the towns might set their faces against it at first, but it would be taxing luxuries more than necessities. We are referring, of course, to the enormous imports of foreign vegetables and fruit which reach this country in advance of our season, and have very nearly ruined British market gardeners. Fruit and vegetables out of season are luxuries, and people who require them should afford to pay a duty on them. An advantage for the home grower in his own market would greatly encourage the production of all kinds of British vegetables and fruit, and in all probability the consumer would very soon reap a benefit in having as good a supply as ever, and of sounder food. The encouragement of more intense cultivation of this kind would indirectly stimulate the production of eggs and poultry, as well as dairying, for it is the occupiers of small holdings which do the lion's share in supplying the country with those articles, the demand for which is ever increasing. Without duties on vegetables and fruits we should be better as we are.

Work on the Home Farm.

We have had a very dry week, with very high winds and an immense amount of dust. Rain is wanted badly everywhere except in the hayfields. Hay making has been the chief work all round us, and ricks may be seen in every direction; little grass is left standing, and in a few days the hay harvest will be over.

Turnips are stopped for want of rain; they grow slowly, and but few fields have yet been singled. Now that hay is practically out of the way all hands can be sent to the Turnips. It is most necessary now to get the hoeing done quickly, for the time before harvest is getting very short. Fortunately the use of string binders makes it possible to keep men amongst the root crops for some time after reaping has commenced.

Farmers who intend to spray their Potatoes must be having the work done. We had a most striking illustration of the value of spraying last year. One field only amongst many was sprayed, and that field kept green much longer and produced a heavier crop than any of the others. The cost of the operation seemed heavy, but it was a remarkable financial success.

Sheep pastures are drying up rapidly, and ewes are beginning to lose their milk. We are meditating early weaning of the lambs. There is plenty of dry food now, and the lambs will never be deprived of their mother's milk under more favourable conditions. There is plenty of grass fog ready for them; we can spare them a few Mangolds, and the Cabbages are ripening nicely, so there will be plenty of good sound food for the immediate future. We shall dip both ewes and lambs when we separate them. The dip we shall use is of the nature of phenyle, and is non-poisonous. The whole operation will cost little more than 1d. per head. Surely there is no excuse for neglect of dipping. This reminds us that we have not got compulsory dipping yet. We trust that such a time will come, and that it is not far distant.

The wisdom of insuring farm men against accidents is shown by two accidents which have just happened, both of them to foremen. In one case, uninsured, the man was trapped between a cart shaft and a wall; he will be disabled for two months at the farmer's expense. The other was knocked down and mauled by a young horse, seriously injured. His employer is receiving compensation from an insurance company.

SPECIAL NOTICE.**EARLY WHITE ROMAN HYACINTHS***Paper-White and Double Roman Narcissus,***FREESIAS, AND OTHER EARLY BULBS.****WM. CUTBUSH & SON** have received their consignments in the finest possible condition, and can execute orders immediately. It is necessary to order as soon as possible, as good bulbs are scarce this season.**General Bulb Catalogue Ready in a Few Days.****HIGHGATE NURSERIES, LONDON, N.; AND BARNET, HERTS.**BY SPECIAL
APPOINTMENTTO HIS MAJESTY
THE KING.**ORCHIDS—ORCHIDS**

QUANTITY IMMENSE.

Inspection of our Range of Houses
IS CORDIALLY INVITED BY**HUGH LOW & CO.,** BUSH HILL PARK,
MIDDLESEX.**TULIPS! DAFFODILS!**

GROWN IN VIRGIN LOAM.

Lowest price consistent with highest quality. Catalogues free.
ALEX. M. WILSON, Bulb Grower, East Keal, Spilsby.**CABBAGE SEEDS**

The Best and Hardest Variety is

Dicksons Perfection, 6d. pkt., 1/6 oz.

Also highly recommended—

DICKSONS NONSUCH, 4d. per pkt., 1/- per oz.**ELLAM'S EARLY SPRING,** 4d. per pkt., 10d. oz.**MEIN'S No. 1,** 3d. per pkt., 9d. per oz.**WHEELER'S IMPERIAL,** 3d. per pkt., 9d. per oz.**MYATT'S EARLY OFFENHAM,** 3d. pkt., 9d. oz.PRICED CATALOGUE Post Free of all other Seeds
for present and later sowing.**DICKSONS SEED GROWERS, CHESTER****WEST'S SLUG KILLER POWDER****WEST'S ANT KILLER POWDER****WEST'S WOODLICE KILLER POWDER**

It will cost you nothing, and prove to you that

**WEST'S PATENT
GARDEN SUNDRIES***Test a
FREE SAMPLE
and yourself
decide
on its merits.**Plants Protect,
Money Save,
and
Labour Ease.*

CATALOGUE, containing 50 large pages, with 100 Illustrations, with Hints on Horticulture, post free. No Trade Terms possible off these low prices.

Buy from the Manufacturer of all Horticultural Sundries—

C. E. WEST, Roundhay.Or direct to the
Works,**Higham Hill,****No Agents.****Sufficient Addresses.****LONDON, N.E.**

No. 1294.—VOL. XLVII, THIRD SERIES.

**Journal of Horticulture.**

THURSDAY, JULY 23, 1903.

Poverty.

PROBABLY half of the ills our plants are heir to is directly traceable to poverty, and an additional percentage indirectly to the same cause. This, apart from the fruit bearers of which, in spite of the gospel of feeding so vigorously preached of late years, glaring examples in the way of impoverished orchards and garden starvelings are still common. From such time as a reaction set in against the use of those heavily rich composts our forefathers delighted to humour their pet plants with, and the introduction of highly concentrated chemical compounds in lieu of them, there has been, and is, judging from appearances not infrequently met with, a good deal of unhappiness in plant life, and that not wholly within the confines of the glass department. Probably past masters in plant culture were prone to carry the great muck doctrine to extremes, like one who

Spreads of manure a waggon-load around,
To raise a puny Daisy from the ground.

But possibly we of latter days have gone to extremes, too, in the other direction, deceived by the appearance of loams obtained locally, the bulk of which, as removed from worn out pastures, is but a hungry medium. That the popular Chrysanthemum has not suffered from poverty goes without saying; gouty stems, fat foliage, and bilious blooms have too often shown a surfeit of the good things of plant life, but that rather emphasises the hungry look characterising many stove and greenhouse plants, even in some of the high places of the great gardening world. Too much margin has, perhaps, been left for the application of liquid stimulant or chemical fertilisers, which, unless judiciously and persistently applied, have rather a spasmodic action on growth and health sustenance than more lasting nutriment combined with the potting compost.

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "**THE EDITOR,**" at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

Plants which are potted annually, and thus divested of most of their former crop of roots, such as Fancy Pelargoniums, Cyclamens, and Fuchsias; or plants which are shifted on under biennial treatment, such as Zonal Pelargoniums and others of that ilk, are so grateful for something more than a poor soil and the promise of good things to come, which they may or may not get, that they undoubtedly merit more consideration at potting time than they are apt to receive. For such things and for others, of which more anon, well dried cowdung is an incomparable addition to the potting compost. A few barrow-loads thoroughly well dried on the top of a boiler until as hard as biscuits, and packed away in a barrel or bin, is always ready and in prime condition for use at any time. Broken up into nubbly bits small or large, according to the size of pots to be used, and mixed with the compost, not forgetting a handful as a finish off to the moss or rough stuff over the crocks, there is a permanent enjoyment for the plants to which vigorous health will soon testify; with most flowering subjects, too, without sacrifice to wealth or beauty of bloom. Proofs of its value in practice are easily obtained, and if young plant growers will put it to the test at their usual time of potting certain things by treating a few plants, say of Fancy Pelargoniums, either as young plants potted on, or cut-backs staked out, to it, advantage over the usual method will be sufficiently obvious to ensure conviction.

Amongst stove plants the Caladium family are quickly responsive to this fertiliser, and given the rough compost they revel in, viz., fibry loam, peat, charcoal, and sphagnum, forming a rough, lumpy mixture, with dried cowdung liberally added, under the mild excitement of gentle bottom heat results will be, perchance, a revelation to many. It is in just such a mixture the handsome Acalypha (hispida Sanderiana) reveals its possibilities as a decorative plant, and noble specimens with a couple of dozen crimson tails depending from amidst broad, massive foliage are grand objects so seldom seen, perhaps, that one might well wax enthusiastic even over such a common subject. Cowper, who remarked,

If vain your toil,
Then blame the culture, not the soil.

could not but admit that the latter is an important element, more especially with plants imprisoned in pots.

The use of bulky manures, however, in potting composts is not suitable for all subjects, and plants of harder texture requiring several shifts ere they reach the final stage as specimens, as which they might remain undisturbed for several years, would rather enjoy a top-dressing annually than its use in the soil direct, where from its nature a soured, soppy condition would eventually obtain. Otherwise there is great scope amongst the many objects of either stove or greenhouse culture which show the pangs of poverty, and plead for better treatment.

No disparagement of the valuable and handy stimulants, such as Clay's fertiliser, or Thomson's Vine and plant manure, is intended, both of which the writer has firm faith in. As with Liebig's extract and "the roast beef of Old England" in the economy of human life, so with the chemical compounds and heavier manures in the plant world, each have their own place on the respective menus, and will hold their own. Like ourselves, too, plants enjoy a change of diet, and the grosser feeders they are the more do they seem to appreciate the grosser and more bulky sources of nutriment. Such at least has been proved in the practice of—A. N. OLDHEAD.

Origin of Vegetables.

The English climate, abused with right goodwill by all and sundry, and abominably as it certainly does too often behave, yet produces a wonderfully varied supply of the genus "vegetable." Nevertheless, we have to defer to and pamper many of its species, and use all sorts of arts and contrivances to bring them "up to the scratch," and train them in the way we wish them to go. This is only fair, seeing that most of them are strangers originally to our soil, and considering the extreme pitch of excellence to which they accommodately bring themselves. Autres terres, autres mœurs, and though we employ our green foods rather differently for the most part to our Gallic neighbours, who serve up at least one dish neat of the particular kinds in season at the

moment, both at déjeuner and dîner, utilising them but little with the other savoury courses; yet we in our way mixing them up and eating them as adjuncts to the meat dishes, enjoy them after our own lights, and with an equal if not keener relish. Still, the continental, less solid and more airy style of cookery lends itself, it must be confessed, more than ours to many insidious and wonderful plats of much delicacy and flavour. Disraeli's epicure and Horace's gastronomic savant would unquestionably cast their vote in favour of the undoubted art of our foreign friends. A subject, therefore, of so great variety, and capable of so many possibilities, calls surely for some research as to the origin and antecedents of its vegetable components.

Taking the Potato first as being so universal nowadays, that its absence would be felt almost as much as that of one's household bread, it is a matter of recorded history that it was discovered and brought over by the Spaniards, those pioneers of a bygone age of industry and adventure, from Quito in Ecuador, and introduced into their own country. Darwin in his official naturalist's voyage round the world in the Government boat "Beagle," made a particular study of all indigenous growths and animals. He describes how he found the Potato to be native both to the damp forests of the Chilian islands and the sterile mountains of the central mainland. As to Raleigh's finger in the pie, there is every reason to suppose the tuber he brought from Virginia was not the common but the Sweet Potato.

Putting the Tomato next as being of kin to the former, though one feels almost inclined sometimes to call it a fruit, especially by reason of its beautiful colour and its pleasant flavour in its fresh state, this, too, can be rightly claimed by South America for its birthplace, though long introduced to other congenial, moist, and temperate climates. It was brought into Europe early in the sixteenth century, and has been called the Love Apple, because it is romantically supposed to incite the tender passions!

Celery, on the other hand, is indigenous to our own country, certainly England and Ireland; in its natural unredeemed state being partial to ditches and marshy places near the sea coast. So, too, Seakale, as its name would lead one to suppose, is a spontaneous growth along the coast of England and Ireland, the Scotch lowlands, and the western coast of Europe.

Asparagus (or old style Sparrow Grass, as some of our rustic gardeners yet term it) may be said to grow wild alike on the south coast of England as on the desert steppes of Russia, where it springs up so abundant that it is caten down by the cattle as grass. The sand dunes of low-lying Holland would make an excellent semi-natural ground for cultivating this delicacy in a large way. Proctor's "dull tame shore," for which he loved "the great sea more and more," might, indeed, be made in such districts, and under such advantages as these, if not to blossom as the Rose, at any rate, to produce much fertility in due season in other ways.

As to the Carrot, this root has become in the course of cultivation very much improved, and probably the "tame" product would scarcely recognise its original progenitor in the article, growing along the seaboard of southern Europe, and more recently in Asiatic Russia; while Salsafy grows in the meadows and pasture land of many districts along the Mediterranean, all along which shores may also be found the common Beetroot, so largely cultivated in places for the quantity of sugar it produces. This root is native besides to North Africa and districts in the west of Asia. The species known as white Beet is grown for the sake of its leaves, which are used as a substitute for Spinach.

More difficult is it to account for the Radish in its wild state, unless it proceeds from a plant of a similar nature, whose habitat is along the Mediterranean coasts generally. So, too, as regards the Onion. Its use and cultivation seem to have been well nigh from time immemorial. This much, however, seems certain as regards ourselves, that its birthplace and native country was not here, its original home being now lost in the mists of time.

Beans of various kinds were known in the days of the Egyptians, and later in the time of the Jews received a fair amount of cultivation, seeming to differ but little from those in use at the present time. They possess a special interest besides, seeing that they were employed for voting purposes both among the Greeks and Romans.

Finishing up with that invaluable member of the Cabbage tribe, the Cauliflower, of which Broccoli is another and newer species and cousin germain, there is little doubt it was introduced from Cyprus, where it has been in cultivation for ages, as also along the temperate shores of the Mediterranean, that natural sympathetic clime and auspicious soil for perhaps two-thirds of the whole race of edible garden vegetables.—J. A. CARNEGIE CHEALES.

Melon, President Loubet.

Writing from The Gardens, Farnley Hall, Otley, on July 11, the undersigned says: "The new seedling Melon, President Loubet, was raised by Mr. F. Pheby, gardener to T. Duncan, Esq., Belmont, Otley, but was grown by me, as shown at the R.H.S. show. Will you please make a note of this?—JNO. SNELL.



Cypripedium venustum Measuresianum.

Amongst the very numerous Cypripediums, the well-known venustum is highly appreciated. Every collection comprises the type and several variations from, some of which occasionally find their way to the Drill Hall. Amongst the most distinct of these during recent years is the one we figure, and which was raised by Mr. H. J. Chapman when Orchid grower to Mr. Measures at Camberwell. We believe Messrs. Williams and Son, of Holloway, possessed the stock. The dorsal sepal is white, lined with green, the petals and pouch being yellow, barred with green.

Cattleya gigas.

Leaving expensive and rare hybrids out of the question, this is one of the grandest of Cattleyas, and one that, given proper attention, any amateur may grow without difficulty. As a rule, imported plants arrive in a good and leafy condition, needing only to be potted at once in clean potsherds after a thorough cleansing.

As soon as roots are seen starting the crocks may be covered with a very thin layer of moss and peat. In a warm house progress will be rapid, and the plants often flower the first season. It does not vary so much as some species, though there are several distinct from the type, and a poor *C. gigas* is very seldom seen.

A good form measures about 8 in across; the sepals and petals are rosy-purple with a deeper tinted lip, this latter having a white eye-like blotch on either side of the column. A native of New Guinea, this fine *Cattleya* was discovered by M. Warszewicz, a Polish collector, but though originally named after him, it is better known in collections by the above title.

The Week's Cultural Notes.

As yet Orchid growth in the majority of cases is in full swing, and the one thing needful is to keep them going as described in recent notes, carefully avoiding anything that is likely to check their progress, and helping them along by suitable temperatures and due attention to atmospheric moisture, ventilation, and cleanliness. This may be said to be the Orchid grower's simplest task, for with bright seasonable weather, long days, and genial evenings and nights, everything is in his favour.

But it is not a far cry now to the time of finishing growth, when watchfulness will be the order of the day, and each species—one might almost say each separate plant—requires attention to its individual wants. For instance, there is the long-bulbed, two-leaved section of Cattleyas, such as *C. Leopoldi* and its allies. These, when the season's growth is nearing completion and the flower spikes are forming, may with advantage be kept at the coolest and driest part of the house, as when growths start before the flowers are formed the latter are seldom as strong for it, while the plant itself is put out of season, as it were. This, with care, can usually be avoided in the case of these long bulbed species, though I admit it is far more difficult in the case of such species as *C. gigas* and *C. Dowiana*.

But the rough and ready methods that answer in the case of *Dendrobiums* must not be practised with these Cattleyas. Speaking of the former, we have now got *D. thyrsiflorum* and *D. densiflorum* both nearly at the apex of their growth. When they are quite finished, they may, after a week in a lighter, drier house than that in which they have been grown, be put out of doors in an ordinary sheltered position, or if a semi-sheltered frame is at command, it will suit them perfectly. Just at first they will need attention to watering at the roots very frequently, but after a couple of weeks in the open air only sufficient to prevent shrivelling will be required.

D. aureum, *D. Bensoniæ*, *D. Ainsworthi*, and *D. crassinode* are all species that finish early and lose their leaves in autumn, and from the time the latter turn colour, preparatory to falling, until the flower buds swell at the nodes, practically no water need be given, but cool, dry, airy conditions that conduce to a perfect rest and subsequent free flowering. These notes may appear to some a little premature, but it is safe to be on the look-out.—H. R. R.

Insects as Garden Adornments.

The great Hymenopterous order, of which ants, bees, and saw flies are well known representatives, includes a host of insects common in gardens, and of varied form and habit, but all four-winged in their perfect state. They do not possess the beauty or lustre of many butterflies and beetles,

though some of them have brilliant wings or bodies, with showy colours. Conspicuous on the wing as flower-haunters, their life while in the grub or larval stage is mostly hidden from view. These insects, like those of some other groups, may be classed as species that are of service in gardens, those that are more or less injurious, and those occupying a neutral position. Many species furnish us with garden music, though it may be to the ears of some people a less agreeable melody than it is to the ears of others. Amongst the bees there is a joyous hum, and another expressive of anger or alarm.

It must be put down to the discredit of the insects under notice that a goodly number of them are possessed of stings, and are often not slow in using them. I have a little acquaintance with the pleasures and pains of gardeners, and so far as I have observed they do not frequently get stung by bees or other insects, yet of necessity they run more risks than the general public. They have to disturb bees in their visits to flowers; occasionally, too, they interfere with wild bees that are busy amongst foliage, or crawling upon the earth. A gardener, however, said to me that his fraternity are not over-sensitive about stings if they do get them, no



Cypripedium venustum Measuresianum.

more than they are to scratches and cuts; but he did object to the tickling caused by ants. These insects, which are Hymenopterous, abound in gardens we all know; nor do they simply crawl upon you, they bite also if irritated. I cannot say exactly how the garden ants attack us; but the large black ants of woods manage the business by making a couple of holes, and then injecting into these some formic acid.

Early in the spring, when the day is sunny, the humble or bumble bees (*Bombi*) put in an appearance—pioneers of their tribe, very conspicuous by size, colouring, and a sort of bustling activity. Certainly these spring individuals have plenty to do, for, like the queen wasps, having survived the winter, it is their work to start the new colonies of the season. Their colour varies much, even in the same species; but they are mostly banded with red, yellow, or black. Some people meddle rashly with them, forgetting, or not knowing, that the females and workers have stings, though the males are harmless. The fiercest is the stone species (*Bombus lapidarius*), very hairy, black, having bright red bands, named from its nest being often in heaps of stones, occasionally in dry, shady banks. But the moss humble bee is gentler, and is not enraged even if its nest is disturbed. This nursery is frequently some distance underground, and covered by a dome of moss; now and then one has been discovered situate in a crack of a garden wall.

Londoners do not regard the humble bees with friendliness. The dislike to them is probably to be explained by the fact that the insects bite holes in the corollas, or tubes, of some flowers, because they cannot otherwise reach the honey, owing to the shortness of the proboscis. Such

flowers are not seriously injured; but the bite disfigures them. Again, on the other side we note that the humble bee, if less important than the hive species, is designed by Nature to aid in the fertilisation of many flowers. Even out of this, though, may arise a grievance, since some say that by their indiscriminate scattering of pollen bees damage the strain of choice varieties. The sagacity of these insects may well excite our admiration when we watch their doings. For instance, we may see several humble bees standing in line; one of them is carding fragments of moss, which he passes to another, and the moss is sent on thus to the nest. Sometimes a gardener finds at early morn a humble bee sleeping in a flower, perhaps having been out late and lost his latchkey. Still more frequent is a species which is actually called the sleeper bee (*Chelostoma florissomne*), which reposes with its head pushed in as far as possible. It exhibits powerful and conspicuous jaws, hence the generic name. By means of these it bores holes in posts and palings, placing its eggs within tunnels.

How diverse the habits of bees are the names given to them show. We have masons, carpenters, upholsterers, and leaf-cutters; these are not social, but solitary. Many of them come into gardens to get materials, even if their work is elsewhere. Bees are sometimes responsible for pieces taken out of leaves which look like the nibbling of caterpillars on Roses, Lilacs, and Willows especially. Most of these "busy bees" are small, yet observable, as they have not the shyness of some insects. The bee that snips our Roses to make its leaf nest, stored with pollen and honey for its progeny, is *Megachile Willoughbiana*; it is black bodied but covered with brownish down, the males having fore legs dilated and fringed. An allied species is handsomer, showing yellow spots in head, legs, and body. It is *Anthidium manicatum*, prefers woolly leaves to line its burrow, which is a hole, found or made, in the ground if need be. Some of the *Osmias* bore into garden posts or other wooden objects—pretty little bees. A familiar one is *O. bicornis*; the female has curiously curved horns, the male bee lacks these; but both sexes are hairy, head and thorax brownish, the body black.

Many gardens, particularly in the South of England, are visited by the sand wasps, elegant and lively insects, which we may well regard with favour, because they are often serviceable to us. A good example is the common species called *Ammophila sabulosa*, a delicately formed insect, with long spiny legs. It is a diligent hunter of small caterpillars, which are carried one by one to the burrow on some dry bank. With each an egg is placed, the burrow being then closed by little pebbles. Another of these sand lovers is the hairy species, *A. viatica*, which Mr. Howitt has fully described from many observations in his Surrey garden. This insect stows away grey spiders for its young, and captures then successfully, being, he says, "all velocity and fire." With each spider one or more eggs are placed, and the hole is carefully filled up; more than that, the wasp finishes it off, so as to leave on the ground no sign of it.

A common insect akin to the preceding, black, banded and spotted with yellow, is *Mellinus arvensis*. It comes about our gardens in May, seeking flies, and though not rapid in movement, succeeds in taking them by artifice. Another May insect of this tribe is a good friend of ours, pretty and useful, having a large head, long legs, and slim body. This is *Mimesa bicolor*; seeks for prey the detestable cuckoo-spit, and contrives to drag this from its frothy envelopment.

Then to the same order belong the hosts of Ichneumon flies, various species of which abound from the spring till late in autumn. They deposit eggs upon other insects, and especially upon caterpillars, whose numbers are greatly reduced through their agency. Some have brightly coloured bodies; the wings often large and beautifully veined, are remarkably nimble, yet strong. Some of them are vocal, the yellow *Ophion*, for instance. Not unfrequently this insect enters our houses during the summer, flying upwards with force. It is an inch long, having a sickle-shaped abdomen.

The cuckoo bees are a remarkable family, parasitic in the nests of other bees, social or solitary. Some of them have been called wasp bees, their nearly bare bodies and wasp-like adornment of black, red, and yellow, suggested the name. These belong to the genus *Nomads*. There are also exceedingly pretty species of *Melecta*, more or less glossy black, but with stripes upon the body of creamy or yellow down.—ENTOMOLOGIST.

NOTES

NOTICES

Good Potato Crop.

Some of the early crops of Potatoes have been got in, and the yield has been a good one, averaging five to six tons to the acre. Moisture is now wanted by the main crops.

Edinburgh Women's School of Gardening.

Misses Morrison and Barker have removed their School of Gardening for Women from Inveresk to Corstorphine, their grounds adjoining the new nursery of John Downie at Belgrave Park.

"Underground Irrigation."

This is part title of a pamphlet by John Grant. The full title of the little work is "Underground Irrigation in the British Isles and in India," and is to be had from the author, 8, Belmont Grove, Lee, Kent, on receipt of 1s. Drainage, rather than irrigation, is required in the British Islands.

Appointments.

Mr. Wm. Jas. Penton, for six years head gardener and Orchid grower at Bowden Hill, Chippenham, has been appointed head gardener and instructor at Studley Castle, in connection with The Lady Warwick Hostel, now removing from Reading, and commences his duties on August the 6th inst. * * Mr. Mark Huntley, for the past four and a half years general foreman in the gardens at Normanswood, Farnham, has been appointed head gardener to The Lady Muriel Paget, Dower House, North Cray, Kent, and commences his duties on September the 28th inst. * * Mr. W. Page, late of Kew, as Orchid grower to G. F. Moore, Esq., Chardwar, Burton-on-the-Water, Gloucester.

Notts Horticultural and Botanical Exhibition.

This society held its summer show in the grounds of the Nottingham Arboretum on Wednesday and Thursday, the 15th and 16th inst. The entries were in excess of last season, plants and cut blooms being well represented, but on account of the adverse season, outdoor fruits and vegetables (with the exception of Peas) were poorly represented. For a group of plants 200 super feet there were four exhibits, the first prize having again been secured by Mr. J. Thompson, gardener to the executors of the late G. R. Turner, Esq., of Derby, the leading feature being the highly coloured, single-stemmed Crotons, faultless in shape, and quite 8ft in height. Mr. Wagg, gardener to W. E. Denison, Esq., Ossington Hall, secured the second place, and Mr. W. Vause, of Leamington, the third, the competition between the second and third group being very close. In the smaller group of 120 super feet, for which five prizes were offered, there was only one entry.

In the different classes for stove and greenhouse plants, most of the prizes were secured by Mr. A. Vause, of Leamington. In the class for one specimen Fern the first award was secured by Mr. Orgill, of Nottingham, with a specimen *Nephrolepis exaltata* (*Aspidium*) quite 7ft in diameter. Collections of outdoor cut flowers were well represented, the first place being secured by Mrs. T. Rothera, Burton Joyce, with a clean, well-grown collection of most of the leading herbaceous plants, interspersed with Roses and annuals. Sweet Peas were a strong class, Mr. F. M. Bradley, of Peterboro', secured the first award. A gold medal was awarded to Mr. Goodacre for a splendid collection of Malmaison Carnations in pots.

The following awards were made for trade exhibits:—Gold medals: Messrs. C. J. Mee and Son, for a collection of foliage plants; Mr. J. H. White, Worcester, for an exhibit of herbaceous flowers. Silver medals: Mr. F. M. Bradley, Peterboro', for an exhibit of Carnations and Sweet Peas; Mr. W. L. Patterson, Shrewsbury, for a collection of Pansies and Violas; Mr. W. Waters, Birmingham, for a collection of Violas; Miss A. Stanley, Manchester, for a display of skeletonised leaves. Bronze medal: Mr. W. Bardill, Stapleford, for Nectarines in pots. The best trade exhibit in the show was a splendid collection of Roses staged by Messrs. J. Merryweather and Sons, Limited, Southwell, which must have been inadvertently overlooked by the judges when making their awards.

A Conifer Conference.

A conference to consider the genus *Coniferæ* in its many aspects, is to be held at Berlin, we believe, in August, and particulars are now being gathered regarding fine or old specimens in the British Islands.

Death of Mr. William Pond.

Mr. William Pond, for many years head gardener at Pinkneys Lodge, Pinkneys Green, Maidenhead, died suddenly on Saturday night. Dr. Plumbe had attended Mr. Pond, though not latterly, and it is supposed that death was due to heart disease. The coroner deemed an inquest unnecessary. Mr. Pond was very much respected among horticulturists, and was frequently a successful exhibitor at the annual shows of the Maidenhead Horticultural Society. He was 63 years of age.

Gardeners in South Africa.

Writing on June 21, from South Africa, a correspondent says: "I see and hear of gardeners coming into this country on the lookout for situations, but gardening in a private estate is very different from that in the Old Country, and situations are few and far between. Nor is this the only thing, for the owners are usually financiers or successful business men who expect far too much for their money, and nearly every place is undermanned. Far too often has the garden to pay itself by selling all surplus fruit, flowers, and vegetables. With these few hints, I should strongly advise gardeners to think before risking coming out to a country where men, who were carpenters and masons ten years ago, are holding some of the head positions in titled gentlemen's gardens at the present time."

Emigrants' Information.

The July circulars of the Emigrants' Information Office (31, Broadway, Westminster, S.W.), and the annual editions of the penny handbooks, show the present prospects of emigration. A new penny handbook, with map, has been issued on the Transvaal. The notice boards are now exhibited, and the circulars may be obtained free of charge, at more than 1,000 public libraries, Urban District Councils, and institutions throughout the country. In Canada there has been a very great demand for farm hands during the last three months, but this has now been fairly well satisfied. In New South Wales good rains have recently fallen, but over a large part of the pastoral districts of the State work has been very seriously hindered by the long drought, and the best opening has been in scrub cutting to keep the starving sheep alive; the total numbers of sheep decreased from forty-two millions at the end of 1901 to twenty-five and a half millions at the end of 1902, and these great losses in the pastoral industry affect the general demand for labour. In Sydney there is a considerable number of unemployed persons, for whom some relief works have been started, and emigrants are advised not to go to New South Wales at the present time on the chance of getting work. In Victoria the effects of the drought continue, and there is no demand for labour. In South Australia, in the country districts, there is good employment for agricultural labourers, for men able to work binders and strippers, for boundary riders, and for married couples without children for stations, but the local supply of labour is sufficient, and the long drought, though it has now broken, still affects the general demand for labour. Speaking generally, no working man is advised to go to South Australia unless he is specially skilled in his trade, or has friends to go to, or sufficient money to live on at first. In Queensland, in the north, there is no demand for anyone except female servants and some general labourers; in the central districts there is practically no demand for anyone; and in the south there is a good demand for agricultural labourers and general labourers only. Throughout Western Australia there is a good demand for agricultural labourers and female domestic servants. In New Zealand competent farm and general labourers and female servants have no difficulty in finding employment. In Cape Colony there is a demand for general labourers and farm labourers. There is no demand for miners or farm labourers in Natal. Permits are still required by those proceeding to the Transvaal; they are not issued in this country, but must be applied for at the Permit Office at the port in South Africa at which the emigrant lands. Application forms may be obtained at the Emigrants' Information Office, and elsewhere.

Mr. Robert Sydenham.

The well-known trader in bulbs and seeds is about to make a voyage to South Africa for the benefit of his health, and starts shortly for Durban.

R.H.S. Committees at Cricket.

The cricket match which was inaugurated last year between members of the Floral and Fruit and Vegetable Committees of the Royal Horticultural Society, has become an established event, as it would seem. The second annual match will be held in the park at Holland House, on August 8. Mr. W. Howe will captain the Floral men, and Mr. Geo. Woodward the Fruit folks. Members of the committees are invited to bring friends. Any communications in relation to the fixture should be addressed to Mr. T. Humphreys, R.H.S. Gardens, Chiswick.

Birmingham Gardeners' Outing.

The members and friends of this society journeyed on the 15th inst. to Trentham Hall Gardens, the seat of the Duke of Sutherland, at North Staffs. Good weather favoured the excursionists, who arrived about mid-day at the Trentham Hotel. Considerable astonishment was evoked by the fine and varied crops of fruit contained in the mileage of glass, and amongst the flowers the fine stock of the Malmaison Carnations were admired. A row upon the ninety acres of lake situated at the far end of the immense Italian flower garden was much enjoyed. Returning to the hotel a refreshing tea was partaken of. A small coterie of orchidists afterwards proceeded by tram to Walton Grange, the seat of William Thompson, Esq., to inspect the famous collection of Orchids under the charge of Mr. W. W. Stevens, the head gardener. At the conclusion Mr. Walter Jones proposed that hearty vote of thanks be accorded Mr. Blair, head gardener at Trentham, for his courteousness and desire to draw attention to numerous and interesting features of the gardens. This was seconded by Mr. John Pope, and supported by Mr. C. B. Bick.

Shirley (Southampton) Gardeners' Annual Outing.

The visit to Swanmore Park was made under the happiest of conditions by the members of the society on the 14th inst. The drive was through a fine stretch of agricultural country, and the park is located on one of the most beautiful sites in Hampshire, where horticulture is carried to a rare point of perfection. Assembling at headquarters a party of about forty were accommodated in a couple of brakes and had a very pleasant drive through Bostock, Swaything, West End, Purley, Honton Heath, Bishop's Waltham to Swanmore Park, and were here, in the absence of the proprietor (Mr. W. H. Myers, M.P.) welcomed by his steward (Mr. Edwin Molyneux) and the head gardener (Mr. G. Ellwood), and were conducted around the grounds.

A move was first made to the gardens, where the most noticeable feature was the excellent show of Roses, while there was also a fine assortment of other flowers, all of which were greatly admired by everyone. A move was then made to the glass houses and vineries, where Grapes of the Muscat of Alexandria and Madresfield Court varieties were hanging in huge bunches. After leaving the vineries an adjournment was made to the pavilion, where a good substantial meat tea was served. At the conclusion of the repast the chairman (Mr. B. Ladhams, F.R.H.S.) expressed their indebtedness to Mr. Myers for his kindness in permitting the visit. The vice-chairman (Mr. Geo. Greenslade) proposed a hearty vote of thanks to Mr. Molyneux and Mr. Ellwood for all they had shown them. Mr. Molyneux returned thanks on behalf of Mr. Myers, and said that if that gentleman had been able to have been there personally, he would have extended a hearty welcome to them himself. Mr. Ellwood also replied.

The secretary read a letter from the president of the society (Mr. W. F. G. Spranger, J.P.) in which he much regretted not being able to join the gathering, but had much pleasure in enclosing a cheque towards the expenses. After tea the company were shown over the model dairy, stables, cowsheds, piggeries, &c., all fitted with electric light. The view from the lawns is superb. Winchester on the right with Portsdown Hill on the left, the long line of hills of the Isle of Wight, and in the far distance can be seen Peterson's Tower, near Christchurch. All too soon the time came to return, but with a hearty send-off from Mr. Molyneux and Mr. Ellwood the party returned to Shirley, via Curdridge and Bottley, reaching home at 10 p.m. —J. M.



Strawberries.

The Care of Runners and Making New Beds.

There is a natural human sentiment about the keeping of an old horse or an old dog after it has ceased to be useful, and allowing it to end its days in the peaceful retirement of kennel or stable, but this kind of feeling must not be extended to the Strawberry bed, no matter how good and prolific it may have been in its best days. The time over which a Strawberry plant will continue bearing depends very much on the conditions of culture and the treatment it receives, but at the most it is only a few years, and when it begins to show signs of impaired vitality, no sentiment or friendly feeling should prevent its being done away with in favour of a younger and more vigorous edition of its own self. I have heard of a Strawberry bed continuing in good bearing for as long as ten years, but this was under exceptional circumstances, and, as a rule, three or four seasons is the limit.

Perhaps when going over your Strawberry bed this summer to pick the fruit you have noticed a falling off. The fruit was not so plentiful, nor yet so fine as in the season before, and here and there a plant has succumbed under the strain of bearing. These are the signs of weakening constitutions and impaired vitality, and when they appear, depend upon it that the best thing is to do away with the bed after all the fruit has been picked, and make a fresh start. By careful management there need be no shortage while the young plantation is establishing itself, and where space permits it is a good arrangement to have three beds, so that when one is going off and doomed to destruction, you have another in full bearing, and a third just becoming established.

But before consigning a batch of old Strawberry plants to the outer darkness of the rubbish heap, they must be made to fulfil one more office, namely, the supplying of young plants for the future bed. There seems to be a natural desire on the part of an old Strawberry plant to establish its kind before passing from the scenes of its own triumphs, and, therefore, its last useful act is that of sending out numerous runners, which follow the instincts of nature by taking root and establishing themselves in the vicinity of the parent.

For the making of fresh beds many people content themselves with taking up these rooted runners in the autumn for transplanting, but in garden cultivation it is a slipslop method to say the best of it. Plants obtained in this way have no chance of becoming established before the winter sets in, and if they manage to survive the latter season, they only produce a few straggling flowers the next summer, and another year passes away before they bear anything like a crop.

If circumstances necessitate the formation of a new Strawberry bed, follow my advice and go to a little trouble over the selection and treatment of the runners, on the assurance that you will be rewarded in the end. First form an idea of the number of plants you will require, and then fill sufficient 3in. pots with a mixture of loamy soil and decayed manure in equal quantities, pressing the compost in firmly. Select sturdy runners at once, that are just emitting roots, and fasten them on to the surface of the soil in the pots by means of small wooden pegs. The soil should be kept moist by watering, when necessary, until the runners are rooted, after which the connection between them and the parent plant may be severed.

The next best method to the above is to cut sods of turf into pieces about 3in. square. These should be well soaked with water, and placed grass side downwards near the plants, the runners being pegged on to them, as recommended above. The turves must be kept in a moist state by watering until rooting has taken place. Failing either pots or turves, I would suggest reducing the runners on a number of old plants to say half a dozen. Then prick up the soil round the parents, and work in a little decayed manure or artificial fertiliser. By this means the young plants will root quicker, and be stronger than if left to establish themselves as best they can in the hard ground. In any and all of the above operations the object is to secure strong early plants, and these obtained, the sooner they are in their permanent quarters the better.

In the work of planting, however, the state of the weather should be taken into consideration. Though an advocate of early planting, I would rather wait a month than put the plants out when the weather is hot and the soil dry as dust, just for the sake of getting them in by a certain date. Strawberries planted in moist weather in August, or even September, have an infinitely

better chance than if they were put out in dry soil under a scorching July sun, and by waiting for suitable conditions the labour of watering is also minimised.

Deeply cultivated, rather retentive soil, is what Strawberries rejoice in, and by the time the plants are ready to go out there will be space available, as early vegetable crops will be removed. Ground that has carried a crop of Potatoes or Peas may be utilised for Strawberries, but before the latter are planted it should be deeply dug, and a dressing of well decayed manure be worked into the subsoil. Two feet apart, and the same distance between the rows, may be allowed in planting, and if the runners are nicely rooted in pots, all that is needed is to see that the soil is moist before they are turned out, and then plant with a trowel and press the soil firmly round the roots. When planting care should be taken so that the crown of the plant is level with the surface of the ground. If set in a hollow there is a danger of the crown decaying through wet, and if much above the surface it is likely to suffer equally through drought.

Hot and dry weather after planting necessitates watering till the Strawberries are well established, but this should be done either early in the morning or late in the afternoon. After cultivation consists of stirring the soil between the rows with the hoe, and if any of the plants are lifted by frost in the winter, they should be made firm and secure by the time growth commences in the spring.

Provided early runners are obtained, and the above routine is followed under favourable conditions, the grower will be rewarded by a nice little crop of fruit the first summer after planting.—G. H. H.

Notes for Exhibitors.

MELONS.—Splitting of the fruits is often a source of much trouble to some growers, while others manage to avoid it almost entirely. The evil is brought about by various and opposite conditions connected with culture. No one can, perhaps, claim complete immunity from the trouble, but undoubtedly by good management it can be reduced to a minimum.

Leaving a chink of air on the top ventilators and maintaining a little heat in the hot-water pipes at night, and during dull or wet days, are generally recognised as good methods to adopt during the ripening stage. In regard to the application of water at the roots, there is, however, much diversity of opinion, and consequently of practice. Some cultivators withhold water entirely after the fruits show signs of colour over the greater part of their surface.

With this treatment cracking is often prevented, especially in the case of varieties which ripen quickly. In other instances there is a shrinkage at the stem through sheer lack of moisture, but this "drying off" process is certainly not productive of the highest flavour and juiciness. Another practice is to let the soil get very dry and then give a little water—"just enough to keep the plant going," as it is often put. Well, my experience has taught me that this is the least effectual of all methods of preventing cracking, because under the influence of dryness at the root the sap vessels contract, and when water is applied the tender skin cannot resist the pressure and therefore splits.

I have proved over and over again that it is not really necessary to treat Melons on starvation lines when the fruit is ripening in order to prevent cracking. Given healthy plants with plenty of root action and a little growth going on at the extremity of shoots carrying a fruit, watering may be continued right up to the time of cutting. Then if the fruits are placed on a dry warm shelf for a few hours the best of flavour may be obtained.

In regard to watering, it must, of course, be performed judiciously, but the soil should get very little drier than during the growing season, while the fruits are swelling. Sometimes the weather appears likely to be dull throughout the day, and under such conditions the plants would need no water till the following morning; but if bright sunshine suddenly occurs those in charge should be on the alert to water, and, if necessary, to shade for an hour or two.

It is then an excellent plan to partially cut through the shoots just below fruits which are ripening. When exhibiting in single dish classes, where the decision is usually decided by flavour, moderate sized fruits, which are heavy in proportion to their size, usually win, provided they have been cut when in just the right condition in regard to ripeness.

It is, however, a very common mistake to cut such deep fleshed kinds as the Hero of Lockinge and Countess a little too soon. They require to be thoroughly ripe before they gain their full flavour. To provide beautifully netted samples 5lb or 6lb in weight for collections of fruit, two or three fruits only should be allowed to develop on a plant. They then grow quickly from start to finish, whereas heavy cropping causes the fruits to remain stationary for a long time, and sometimes to become hard in the skin.

FIGS.—Brown Turkey and Negro Largo are still the varieties generally exhibited early in the season. While taking their last swelling the selected fruits should be fully exposed to sunshine (by tying back the leaves), and the atmosphere of the house kept fairly dry by free ventilation.

To keep red spider in check syringe the foliage once a day whenever it can be done without wetting fruit which is approaching ripeness. Water the borders whenever the soil is fairly dry, and apply stimulants in the form of artificial or natural liquid manures. When fruits can be picked from the trees and staged the same day it is not a serious drawback for them to have burst their skins so as to show the fresh, luscious-looking flesh beneath, but for distant shows always select fruits with whole skins.

In warm districts those who have good trees of Brunswick in the open air will find them of great service for supplying grand fruits during August and September. The shoots should be trained very thinly, and the trees watered freely when necessary, and it is always wise to enclose the best specimens in muslin bags as they approach ripeness, as wasps will often ruin them in a day. In close competition a grand dish of this fine Fig in a collection of fruit will sometimes just enable the exhibitor to snatch victory from an opponent.

APPLES.—Gascoigne's Scarlet Seedling, Lady Sudeley, Beauty of Bath, and Worcester Pearmain are favourite dessert varieties for August and September. It is always an advantage to have a few trees growing in pots, as they can, of course, be ripened earlier, and the colour is generally brighter, too, than when grown in the open air. When grown under glass there is usually not much superfluous growth to prevent the fruits from getting full exposure. Those growing on bushes in the open air should, of course, be thinned early (this year I am afraid few have needed thinning) and special attention paid to stopping. The great point is to give every selected fruit full exposure, to ensure early ripening and even colouring, and to secure these essentials the shoots may, where necessary, be pinched somewhat earlier and closer than is desirable under ordinary conditions. Superphosphate, given at the rate of 3oz per square yard, and watered in, is also of great advantage in helping forward the colouring process.

PEARS.—Jargonelle, Clapps' Favourite, Williams' Bon Chrétien, and Souvenir du Congrès figure frequently on the exhibition table during August and September. In their case it is an even greater advantage to have trees in pots than with Apples. However, whether growing in the open air or under glass, the chief points to aim at are to expose the fruits fully to sunshine and feed liberally while they are swelling, sulphate of potash being the best of all manure for Pears.—H. D.

Saxifraga aspera.

Among the entangling mazes which obstruct the path of the cultivator of the Saxifrage in its varied forms, there are none so perplexing as that of nomenclature and classification. Yet there are certain distinctions, not easily described, but evident to an observer, which help one largely in selecting plants which are distinct in their way. Among the members of the genus which may be taken as typical of a small group is *S. aspera*, a representative of the section called *Trachyphyllum* by some authorities, the leading features of its plants being broadly described as being of dwarf, tufted habit, with fleshy or leathery small entire leaves. Some, such as *S. aspera* and its variety *bryoides*, are hard to the touch, and look like short, thick, grey-green pieces of cord. The species *aspera* may be said to approach the Mossy section, though botanically it is somewhat far apart from it. It forms a small, prostrate, tuft of grey-green lance-shaped ciliated leaves, and growing only about 3in high. As a flowering Rockfoil it is of little value, as its blooms, which are whitish, are sparsely produced, and I grew a plant for years without it giving me a single bloom. It forms little stolons, and differs in this, as well as in the colour of the flowers, from its reputed variety, *bryoides*. The latter forms rounded rosettes of leaves, and the blooms are yellow. It might almost have been retained as a species. *S. aspera* and *S. a. bryoides* are not very particular as to the soil in which they will grow, and a compost of loam and leaf mould, with a little sand and grit, I have found to answer well. Both are perfectly hardy.—S. ARNOTT.

Illustrations from Southampton Show.

On four of our pages to-day, we give features from the recent horticultural exhibition held at Southampton, and which we fully reported on pages 59 and 60. The group of Gloxinias herewith shown was staged by Messrs. John Peed and Son, of the Roupell Park Nursery, West Norwood, London. The colour of this collection was magnificent, and certainly it was one of the features of the show. An inspection of the photo shows the light and shade of the blooms, which, to an experienced eye, will reveal the high class merits of the collection. The varieties were Mrs. W. Weaver, Howard Preed, Boule de Neige, Mrs. J. Preed, Countess of Warwick, Empress of India, and others. The group received a silver-gilt medal.

The exhibit of vegetables (from Sutton's seeds), shown on a back page, came from Lord Aldenham (gardener, Mr. E. Beckett), Aldenham House, Elstree, and received first prize. It contained Early Giant Cauliflowers, Duke of Albany Peas, White Leviathan Onions, New Red Intermediate Carrot, and Perfection Tomato. It will serve as a guide how to stage vegetables effectively. Every care is taken to have even samples, to set them out with taste, giving each subject sufficient space and freedom from its neighbour, and to have everything well finished off. What is the purpose of good culture, if judgment and care are lacking in the disposition of the produce?

Then there are four views of the Rose exhibits. The Roses were backward on the whole, but the blooms in the photographs are creditable. Mr. F. W. Flight (gardener, W. Neville), Cornstiles, Twyford, was leading prize winner in classes 2, 18, and 23 for the 18, 12, 9 distinct varieties respectively. The gentleman to whom we owe these photographs names the following as the best in these classes: Mrs. E. Mawley, Madame Cusin, Maman Cochet, Anna Olivier, Golden Gate, White Maman Cochet, Madame Hoste, Ernest Metz, Gustave Piganeau, A. K. Williams, Bessie Brown, Mrs. J. Laing, Marquise Litta, Caroline Testout, Ulrich Brunner, Marchioness of Londonderry, Comtesse de Nadaillac, Muriel Grahame, Medea, and Niphotos. He remarks: "One exhibitor, who is a well-known gardener, in-

formed me that out of 500 plants, he could only gather enough blooms to enter in one or two classes, and even then without success. All along the south coast, the same as elsewhere, the winds and rain have played havoc with the Roses. The exhibits of Roses, taken as a whole, were very poor, the blooms being imperfect in shape and badly coloured."

The winner for the six blooms (class 20) was Mrs. E. Croft (gardener, G. H. Kent), Perwate Murray, Ryde, I.W., who had finely formed, well coloured flowers of Marquise de Castellane, Her Majesty, Le Havre, White Maman Cochet, Ulster, and Kaiserin Augusta Victoria.

Fruit Crop in Blairgowrie District.

During last week over forty tons of Strawberries and Raspberries were despatched by rail from Blairgowrie. Prices for Strawberries are still rising, the top being £25 to £26 per ton, free on rail. There has been a very keen demand for Raspberries, which are turning out a good average crop, and of about 2,000 tons grown in this district there are probably only about 100 tons still unsold. As there is no surplus fruit in England preserve manufacturers, fearing a scarcity of Scottish fruit, and their inability to secure sufficient to meet their requirements, were on Saturday buying at £40 per ton on rail, which is an exceptionally high figure. Raspberry picking will be in full swing next week. As a beginning in the way of doing away with "tramp" labour in the fruit fields, one large firm of growers have erected and fitted up excellent housing accommodation, and have arranged with the Scottish Council for Women's Trades, Glasgow, for about one hundred female pickers.



Southampton Show: Messrs. Peed's Gloxinias. (See page 75.)

Gadding and Gathering.

Reading College Garden.

The Portland Road Nurseries, till lately tenanted by Messrs. Sutton and Sons as their seed trial grounds, have been brought under the directorate of the Reading College Senate, who thus provide a good horticultural experimental area of seven acres for the fourteen students who are under training. The superintendent of this garden is Mr. W. H. Patterson, an old Kewite of note, and previously head gardener and instructor at Swanley Horticultural College. He, with his wife, work together, and have already, even after the lapse of only a few months, transformed the old grounds, and have furnished a trim and instructive garden. The advance so far made is, of course, merely a beginning, but it is eminently satisfactory so far as it goes, and was only attained by constant application carried till late in the evenings.

Part of the ground to eastward, at present a grass paddock, will be eventually cultivated and planted as an orchard. This section previously belonged to Mr. G. W. Palmer, the biscuit manufacturer of Reading, and what is called, "Mrs. Palmer's garden," separate from the paddock, is under stipulation to be maintained even as she designed and planted it. This is but a tiny feature of the college garden, and consists of a rounded, raised herbaceous plant and Rose bed, with sward, paths and shrubberies around it.

Turning to the already planted orchard, the young trees are seen to be taking hold, and the variety of fruits will afford material for some study thus early. There are twenty-six varieties of Apples, and proportionate quantities of the other fruits. Loganberries and bush fruits find a place. Pointing to a row of six Pear trees that had been planted in March last, Mr. Patterson stated that each had received different treatment, by way of experiment. The first had been left normal (unpruned); in No. 2 the fruit buds were taken clean away; No. 3 had been kept sprayed and watered well; No. 4 was treated to nitrogenous liquid; and the last was very severely pruned. Distinctly the best evidence was given by No. 2, which was pushing strong stout shoots, and was a large shapely tree. The hard pruned one had made very little growth, but would fill out in time; and No. 1, if I recollect right, was poor altogether.

In this connection the exhibit made by the Agricultural Education Department at the recent Royal show in Park Royal, comes to mind, and here one saw two young trees side by side. One had been branch-pruned at planting; the other had not. What was the difference? It was very marked. The unpruned tree had a splendid fibrous root system (so had the other), and long, strong, good shoots, bearing healthy foliage and one or two fruits. It was a good healthy tree. The pruned neighbour, alas! had scarcely done more than break its few buds. The question seems to be, which of the two would make the best tree eventually? And the reply on the top of this might be given that "it all depends." Placed into the hands of a sane person, I see no reason to doubt that the unpruned tree would not spank ahead, and continue to lead. Our friend "W. R. Raillem" has a Golden Spire Apple tree in his garden at Sproughton, and to use the knife on this is the exception. I asked him why, and he turned an irate eye upon me as he said, "I'm getting old; what do I want to cut away fruitful wood for? Talk about building up a tree, I want Apples." And to this end the branches were weighted downwards, thus tending to fertility, and an open, airy centre to the standard.

Reverting again to Reading College Garden, a collection of Sweet Peas is grown to demonstrate as far as possible Gregor Mendel's Law. Not far off is a patch of Rhubarb, the crowns having been forced this year, and then planted out in March. They have been liberally fed with fertilising liquid, and now the stalk and blades are fleshy, and stout, and quite dense. At the price Rhubarb has been bringing this year, this express system of culture would grandly pay. Then there were cultures of the various Brassicas, and Celery, Peas, Beans. A new seedling bed of Asparagus showed an even germination, not too thick; in fact, each plant just nicely apart from its neighbour, so that the question was asked, "Would you thin these this year?" to which the answer was, "By no means," for one can just as easily do that if it is necessary next year, the plants being still small, and as the bed will doubtless be lifted for the transplanting of some of the stock, there was nothing to gain and everything to lose by such premature thinning. These were my cicerone's own tenets, and he, moreover, mentioned the fact that growers can usually get 9s. per 1,000 for young, tender Asparagus.

The newly laid-out beds leading from the sheds through the paddock to a west fruit wall, are now filled with annuals, and all growing well. In this portion of the ground there are a few old orchard trees full of "snags," a grand object lesson (and that is what the garden exists for—teaching) on how *not* to prune. The American blight lay thick in by the crevices. "Can Poppies be transplanted?" Can *Cistus ladaniferus* and *Phyllostachys* and

other subjects of this sort be transplanted in May? Few care to try it, but here again, in proper hands, the operation can be safely and successfully performed, as can be seen at Reading College Garden. Bees, I may add, are another of the features of prime interest, and the latest forms of hives and apparatus are used. But now I leave my friendly guide and his charge, and trust that not a long time may pass ere I visit him, his wife, and their labours, again.

Shrubs and Undershrubs at Kew.

The Honeysuckles are in full flower, including the quaint primrose yellow *Lonicera iberica*, but none beats our native *L. Periclymenum*. It is fitting to draw attention here to the golden-netted Japanese Honeysuckle, and its suitability for rockeries and rooteries. *L. japonica*, with buff and golden flowers, is very free, and most deliciously scented. Two rare species, but both too tender for out of doors, are *L. Hildebrandtiana* and *L. etrusca*, the latter from southern Europe and the former from China. They are each rampant climbers, bearing orange clusters, and *Hildebrandtiana* has flowers 8in long. *Philadelphus Billardi* carries from fifteen to over twenty pure white flowers in elongated trusses, the stamens in the centre of each giving them particular beauty. The flowers are each over 1in across. *P. coronarius* Gerbe de Neige is dwarf, free, and graceful; *Boule d'Argent* is double, and therefore distinctive; *P. c. variegatus* has cream and green foliage; *P. microphyllus* is an early flowering, very dense growing sort, with small flowers, and slender, twiggy shoots. *P. grandiflorus laxus* is good; *P. Lewisi* has snow-white flowers and white stamens: it is, therefore, a gem. *P. grandiflorus floribundus* is the best of all, with pure white blossoms nearly 3in across, beautifully borne in showery masses on all the young wood from the topmost to the lowermost branches. The leaves are dark green and large, this being a vigorous grower.

Zenobia speciosa pulverulenta is another of these, bearing from the axils of all the leaves triplets of grey-white, waxy bell flowers like those of Valley Lilies, but larger, and they all hang downward. The shrub flowers on last season's wood, but not on the young growths, these being quite glaucous with a "bloom" like that on well-finished Grapes. Growing as a true bush, 2½ft to 3ft high, and doing well with other Ericaceæ, this distinguished variety should be found in every collection. The type plant is a bright leaved, close growing, admirable shrub.

Then there is *Kalmia angustifolia*, or "Sheep Laurel," with bright purplish-red flowers now nearly over, and with it is the variety *rosea*, a sweet thing. These shrubs, of course, like a cool bottom, whence they flourish, and along with the better known *K. latifolia* they are charming little subjects. Nor can one pass over *Daboecia polifolia*, which seems happy anywhere, and generally can throw up a lively show of slender racemes, bearing from four to eight flowers of a rosy, white, or purple colour, according to the variety, and shaped like those of *Erica propendens*. Good plants form rounded, close-set masses, rising a foot high in the centre, and not unlike the Sun Roses in foliage and growth. The best known varieties are *bicolor*, *striata*, and *alba*. If they are stunted or starved the little shining leaves become quite blood-red.

Looking at the compact, spreading masses of *Bruckenthalia spiculifolia*, which never grows more than half-a-dozen inches high, the comparison of the form of growth with that of some of the coral polyps seems not amiss. It is of erect and formal growth, and the tips of the shoots are brightly luteous, while over the cushion-like bed the rosy spikes are sprinkled, these being comparable to the flowers of *Polygonum affinis*. Beds of *Erica cinerea*, *E. e. purpurea*, *rosea*, *alba*, and *alba major* and *minor* are masses of colour; while the deep pink clusters of the cross-leaved Heath (*E. Tetralix*) may be found on mountain, moor, and garden. *E. T. alba mollis*, a dense, erect, brittle, grey-coloured form with white flowers, is not so well known as the commoner *E. T. alba*, which seems to be the freer flowering.

Rhododendron ferrugineum, one of the loveliest of alpine shrubs and doing well in England, is now just out of flower and is pushing young growths, which can be encouraged by removing the ovarian clusters. The last flowers of *R. cinnabarinum*, which is deep crimson without and bronzy-einnamon within the narrow tubular flowers, have also fallen, and the shrub, which is a Sikkim native, soon flags if left without abundance of root moisture. This profuse flowering and very distinctive species is one of my great favourites. Lastly, *R. hirsutum* will be found flowering in certain coolsome places. It is dwarf and spreading, a true Alpine rock shrub, and bears terminal clusters of bright, lilac-erimson, tiny flowers.

There is hardly any need to mention Roses, unless to point out once again the decorative and utilitarian merits of the Sweet Briar and other garden Roses for hedges. Not only are they beautiful in shape, with glossy foliage, but their lovely, simple flowers give pleasure at all times, and not a few are sweetly fragrant. By the way, is the double white Sweet Briar much known? The flowers are as large as a China and perfectly double, while the foliage is thick, robust, and large.—WANDERING WILLIE.



Names of Plants.

Although I have a fair knowledge of Latin, which is often useful, I fail to see why plants should have names given to them which the men who have most to do with them can neither understand nor pronounce. Further than this, the words used have no existence in Latin, and these dog Latin words are mixed up with dog Greek and French. Not even content, the "inventors of language" seem to think that any English word or name can be made into Latin by adding "um" to the end. There is, as an example, a very fine Anthurium named after myself in sham Latin, "Fletcherianum." What can be the meaning of this, and how would a Frenchman pronounce it? Originally Latin was intended to be a universal system of nomenclature, which could be understood almost all over the world; but this idea has been done away with by the supposed conversion of English to Latin by the much enduring "um."—T. F.

Rose Show Dates.

I do not quite follow "The Herefordshire Incumbent" in the difficulties he sees in the dates of affiliated Rose shows being arranged by the N.R.S. None of the cities he names—Birmingham, Leeds, and Manchester—have affiliated societies, and I can conceive no reason why Hereford should be asked to "take a back seat." Further, I spoke only of clashing with shows in the same district, or with N.R.S. shows. It would obviously not matter so much if Hereford clashed with an East Anglian show.

Hereford may be, for all I know, "the oldest Rose show in existence," but is it older than Norwich, which celebrated its fiftieth anniversary in 1879 by an extra grand show, when Mr. R. N. G. Baker came all the way from Exeter in the pouring rain of that terrible summer, with magnificent H.P.'s which carried all before them?—W. R. RAILLEM.

"Gold Medallist in Horticulture."

On page 531 of the last volume of the Journal I asked several questions under the above title, which appears as an announcement (on advertisement boards at Snow Hill Station, Birmingham, and several other stations on the Great Western Railway) of special qualifications in horticulture. I am disappointed in not receiving answers to my inquiries as to the qualifications of the advertiser. I hoped that the advertiser might have some friends about Birmingham who would have substantiated for him the claim that he makes inferentially; or that the advertiser himself—which would be more manly and straightforward—would take the public of Birmingham into his confidence, and tell them in what way he is a "gold medallist in horticulture."

I have searched the records of the Royal Horticultural Society and of the Royal Botanic Society, and the South Kensington reports of examinations in botanical science; and I have made inquiries in other likely directions where there is a possibility of a gold medal having been awarded for horticulture or botany, and I cannot discover the name of the advertiser in any reports or lists of candidates for honours in horticulture or botany in connection with any society.

It has been suggested to me that the term "gold medallist in horticulture," as it appears on the advertisement boards, is a "flowery" way of stating that the advertiser has been awarded a gold medal of a certain size and value by a grateful and very liberal horticultural show committee for a non-competitive exhibit of a few of our very easily grown and common hardy herbaceous flowers. If this is the fact, are not the terms at the head of this letter, and on the advertisement boards, misleading? Would not it be more correct and truthful to use the words "recipient of small gold medal for hardy flowers"? Then the most ignorant would rightly understand, and not be so liable to make a mistake as to the qualifications of the advertiser.

Gold and silver medals are as plentiful among non-competitive exhibitors as Blackberries in autumn; but we have never before observed a recipient of either a gold medal or a silver medal under such circumstances advertise himself as a "gold medallist in horticulture." Trained horticulturists like my friends Miss Harrison, one of Mr. George Cadbury's lady gardeners, and winner of the Royal Horticultural Society's medal in horticulture; and Mr. Lewis Castle, manager of the Duke of Bedford's experimental fruit farm, winner of the Worshipful Company of Fruiterers' prize of gold medal and twenty-five guineas last year in open competition to all England, or Great Britain, are the bonâ fide "gold medallists in horticulture."—INQUIRER.

Queries.

I have leave to cover in part of my kitchen garden with wire netting against birds. The walls are 10ft high. Can any gardener advise what sort of iron posts should be used? How fixed into the ground? What width of netting, gauge, and quality? What sort of iron horizontal supports? How strained over the walls? How to support brick walls?—C. N.

Back to the Land.

Dare I say a few words upon the divergent opinions so freely offered upon "Back to the Land"? The subject has been well thrashed by many correspondents, and there appears a strong determination to agree to differ. The life of the small holder is not an ideal one; from its very nature it must for the greater part be hard and rough, with, in but few instances, remote possibilities of much pecuniary gain. Surely, however, such an existence is infinitely preferable to that spent by so many of the inhabitants of the slum portions of our great towns and cities. That success or failure depends largely upon local conditions and individual effort and enterprise needs little expatiation.—PROVINCIAL.

The first and most important principle in the politics of a nation is the care of its population. This is of necessity a nation's greatest wealth. The means whereby a steady increase is assured must always engage the attention of the statesman, and whatever they may consist of, it is absolutely necessary that they must contribute to the general good and happiness of the people. I think statesmen and political economists are agreed upon this point. How this is to be effected, or, if already in partial effect, how maintained, is ever the anxious question. Perhaps no one is able to very materially alter the general trend which works as silently in the upward and onward direction as the law of natural selection, but we can watch over its progress and foster here a promising tendency and curb there an undesirable incubus.

The policy of British legislation has been for many years one of vigilance and watchfulness rather than one incurring danger by unwise interference. The consequence is an increased prosperity in wealth and population. Such a state of matters must always, if it does anything, presuppose happiness, contentment, and plenty. Now, on glancing fieldwards, though we may not be learned in the secrets of the art of producing the all-essential foodstuffs for a people, we find, instead of Wheat, grass lands on every hand. Wealth consists of land and power, and it very naturally strikes us as strange that this part of wealth is so indifferently utilised in Britain. We ask, why, then, is Britain possessed of so many luxuries, her people the best paid, fed, and clad of all nations, and yet they till little of their land? We reason further, and say that Britain's wealth, happiness, and prosperity, all of which have no compeers, cannot be due to her productions in the form of food. We soon satisfy our curiosity in that matter, and eventually find that she purchases her necessities and needfuls, as well as her luxuries, in the foreign market. Even cut flowers have engaged her attention last year to the extent of £238,463, a fact of itself indicative of the wealth of the nation. She goes to a foreign market because she finds it necessary to do so, for it is the life of a successful trade to buy your wants in the cheapest market, and the more we do so, it follows that we sell more of those things we need less ourselves. It is the old question of barter over again. Britons want food, which cannot be cheaply enough produced at home, and in return they give coals, iron, &c., for that which they need. We are ready to patronise home foodstuffs, if they can be put on the market alongside with those of our foreign producers.

Think for a moment, seeing how completely we get along without cultivating our home land, how the matter would stand with us if our ports were closed to Free Trade. We would then be at the mercy of a class that never has much to boast of unscrupulous probity in dealing. Besides, any multiplication of effort in the direction of food producing could but insufficiently supply the demand, allowing that all available land for the purpose could be made to turn out many times more than it does now. Is it a matter for congratulation, therefore, to anticipate men investing their life savings in a few acres of practically unproductive property? Let any one who thinks so try, and I have no doubt he shall change his idea of the matter. Even on the Continent, where the conditions are immensely more propitious, how do things stand? This is what "Fairchild," in his admirable little treatise, "Rural Wealth and Welfare," says on that point: "One-third of France is cultivated by owners of farms averaging 7½ acres. Four-fifths of Bavaria, Belgium, and Switzerland are in farms of less than twelve acres. Even Prussia has 900,000 farms of less than four acres. These farms vary in quality from poorest to richest, and peasant farmers are not able to boast of their wealth." This is precisely what I would expect. Such farms cannot support a family, and the abortive energy expended in the pittance which is produced exceeds by far its value, and labour is always scarce in such communities, therefore it must be difficult to replenish the exchequer.—D. C.

The "Daffodil King" on Tour.—No. 7.

(Continued from page 50.)

The vegetation and animal life of Australia are highly peculiar—so different from those of the rest of the world, as to show that this great island cannot have had any land connection with the continent within a recent geological period. The characteristic trees are mainly different kinds of Eucalyptus, some of which grow to a greater height than even the tallest giants of Sierra Nevada, California (Chisholm). We may note also Acacias, Epacris, Tree Ferns, and the type of vegetation known in our gardens collectively as New Holland plants. Mr. Scott Elliott in his "Nature Studies," gives a list of the heights of the various tallest trees, the first on the list being Eucalyptus amygdaloides, reaching to 459-498 feet. Eucalypti are being introduced to parts of California, and largely into South Africa. They make forests in a short time. Witness the woodlands on the outskirts of Johannesburg, barely over twelve years old, and in the distance resemble ancient forests.

AUSTRALIA

After having noted Mr. Barr's travels in North America, Japan, Hong Kong, and the Philippine Islands, we are now introduced to the great Island Continent of the southern hemisphere, and Port Darwin, Queensland, is our starting place.

Port Darwin has a "botanical garden," but a garden only in name, however, for there are few representative plants. Coconut Palms do well, and it was here that Mr. Barr saw the largest Banyan tree of his tour. He was very considerably interested in the collection of small birds made by a Frenchman for the European markets. He had thousands of them caged preparatory to his annual visit to Hamburg and London.

The next stopping place was Thursday Island, the centre of the pearl fishery, and the town here is more Japanese than British, and remarkably hot. No other ports of call were recorded till Brisbane was reached, for the same steamboat company had coasting boats which took off both passengers and cargo, while the ocean ship lay well out from land.

According to Mr. Barr's estimate, Brisbane is the second loveliest town in Australia. It has its so-called botanic garden, but the Government affords very little support, and one can only speak of it as a public park. One part is devoted to flowers; there are a few remarkable trees, and lastly, a refreshment place. Queensland maintains two "man o' war" ships for the protection of its rivers. During a great flood one of these was landed high and dry in the botanic garden! Shortly after, another flood came and carried it back again.

In the neighbourhood of Brisbane, Pincapples are grown, and they are of very excellent quality. They are shipped to Sydney and Melbourne. There is also an experimental farm some distance down the line, under very able management, and designed to take a great many students. Numerous alterations and improvements were contemplated. One of the most profitable cultures consisted in a fine breed of pigs, which sold very readily for breeding purposes.

Maitland, a pushing little town, was the next resting place; and it is in this neighbourhood that Lucerne is so largely grown and made into hay. Much of this found its way into South Africa during the war.

Then comes Newcastle, famous for its coal, and Sydney, a city of narrow streets, yet possessing some very fine buildings. Inquiring the reason for the very narrow streets, Mr. Barr was told they were old bullock tracks along which shanties were located, and were succeeded by better houses, and thus the streets. Like London, the city "grew," with no general plan, though it is today very well built, and from a business aspect it is "a little London." Its botanical garden may be said to have been commenced "when Sydney was Australia," for only a few miles out lies Botany Bay, leading to the harbour, one of the finest in the world. It is exceedingly strange on the part of Captain Cook, who landed at Botany Bay, to have missed the opening to this grand sheet of water, in which the largest ocean steamers are berthed close up to the land. Gardening in and around Sydney will always be limited owing to the geological structure, which is almost all solid rock, with only a modicum of yellow loam. The botanic garden, however, has a world-wide fame, and was long presided over by Mr. Charles More, who is now retired, and succeeded by Mr. Martin, a most painstaking botanist. The plants under glass are in excellent condition, while out of doors the Palm collection calls for a special note. The botanical garden proper is confined within the old walls, and the area is not large; but probably by this time the wall has been removed and the large decorative area (which is reclaimed land) brought into the botanical policies. The parks and street corners of Sydney are, unfortunately, largely the resort of idle fellows and schemers; well dressed they are, but no one knows how they get their living. They are known to the police, however, as "gentlemen of no occupation."

THE BLUE MOUNTAINS, AND JENOLON CAVES.

The Blue Mountains are the part of the Dividing Range behind Sydney. It may fitly be observed that the Dividing Range forms

throughout New South Wales a more continuous barrier than it does between the coast lowlands and the interior plains and tablelands in the colony of Victoria, and it was long before the settler found a way across the Blue Mountains. No one should fail to go up the Blue Mountains. There are some most wonderful depressions in the land, such as Mr. Barr had not met with anywhere else in his travels. To all appearance these, at some remote period, may have been great inland seas, such as are now to be seen in the United States of America. At present the basins are covered with virgin forests, and the home of parrots and other wild fauna. Here Mr. Robert Pitt, cattle salesman, Sydney, has a fine house and large garden, in which are grown some fine sorts of Cherries of very superior quality, and many other kinds of fruits; also many acres of Daffodils. Mr. Pitt, during the "great boom" in Australia conceived the idea of growing bulbs of all kinds, and spent many thousands of pounds in the purchase of Hyacinths, Tulips, Daffodils, &c., with the view, as he told Barr, of supplying gratuitously cut flowers to the Sydney hospitals &c. The bubble burst, and the man who was rich in paper to-day found himself poor in coin on the morrow, and so charity was realised as a thing which begins at home.

All the bulbous plants perished except the Daffodils, and these alone represent the fortune expended in the interest of "good work," and are now a source of income in the sale of the cut flowers and dry bulbs. Continuing the journey by rail up the Blue Mountains, a necessary rest is made for the night, when the coach starts in the morning to the Jenolon caves. These are maintained by the New South Wales Government, and lighted by electricity. The caves are many, and new ones are continually being found. The guides are also conservators, and receive a premium for every new cave found. Two parties are taken through different caves daily, and to see all several days are occupied. One cave is visited after breakfast, and one after luncheon. Stalactites and stalactimites are numerous and varied, and in one of the caves there is a charming miniature cavern, called the Fairy Grotto, in the main wall of the cavern. The guide throws a limelight on it first; it looks beautiful, but hard, then he turns on the electric light, all is perfectly transparent, and so lovely, one seeing it is not likely soon to forget the charming sight, each stalactite and stalactimite being in miniature and all perfect, it having escaped the eyes of the early visitors to this cave before the Government had taken these natural wonders under their control.

Paths are cut all through the caves, and no one is permitted to touch or to pocket any article within enclosure. These caverns had been the homes of millions of bats, as evidenced by the great accumulations of their droppings. None were now to be seen. The hotel is an excellent one, and run by the Government; no intoxicating drinks are allowed to be sold. The air is most delightful and refreshing. After spending hours underground a run on the hill drives away all feelings of fatigue, and sharpens the appetite for dinner. The feeling was one of delight to those who had come up to put in a few days or weeks and thus escape the greater heat of Sydney. "I do not remember," said the aged traveller, "any such recuperating atmosphere as that I enjoyed after the fatigues experienced in exploring these wonderful calcareous productions."

Referring again to the Caves, Mr. Barr said he visited a similar cave in Mondonedo in Spain, and believed that it might compete with, if not excel, those of New South Wales, and in saying this did not detract from those of New South Wales, only to show Europe has wonders, but undeveloped, but it could only be seen by torch light, and was not safe to enter unless a guide rope was used. The trip to the N.S.W. caves is inexpensive, and is arranged by two different tourist associations. A railway passes over the Blue Mountains, and the journey is finished on coach.

Violas and Pansies from Rothesay.

Mr. William Cuthbertson, the senior partner in the well-known Scottish firm of Dobbie and Co., has sent the writer a lovely gathering of these charming flowers, that have been brought to such a high state of perfection by the firm.

Amongst whites, the two best rayless varieties are Emma Sophia and Mrs. Macrae; whilst in rayed flowers, Duchess of York and Bethea are the two best, of excellent habit, which makes them suitable for bedding as well as for exhibition.

General Baden-Powell is an exceedingly rich yellow for exhibition. The best rich deep yellows are Bullion, Klondyke, and Kingcup. Primrose Dame, Lady Margaret, and Mary Robertson are primrose-coloured flowers, the first-named being an A1 bedder.

Blue Duchess is the best light blue variety for massing. Lady Roberts is a charming flower, white, edged pale blue. Florizel is pale lavender in the mass; it is one of the late Dr. Stewart's fine introductions.

Endymion is a beautiful lemon-yellow self, indispensable for exhibition. Another flower of high exhibition standard is Meteor (Paton), grand, large, rich yellow of perfect habit. Paragon, not yet sent out, is a rich, deep purplish-violet flower, with golden eye. A large and



Flaked and Self Carnations. (See page 81.)

telling flower is Mrs. T. W. R. Johnstone (Kay), upper petals mauve, under petals glossy black blotched with mauve, clean eye and white brows.

How sweetly scented these flowers are! One writer thus poetically puts it: "Violas resemble a spray of Western Pine in having a beauty and fragrance all their own."

A brief cultural note may be helpful to the many admirers of these charming flowers. The best way to obtain carpets or masses of Violas is to insert cuttings in a cold frame in August or beginning of September; such cuttings will make nice plants before the winter sets in. In February or March the plants should be placed in well prepared beds, 4in apart each way. Some beautiful varieties of Fancy Pansies of the firm's new Victoria strain, a fine acquisition, are well worthy of mention; flowers of brilliant hues, richly marked.—J. B.

The New Curator at Birmingham.

The committee of the Birmingham Botanical Gardens have appointed Mr. Thomas Humphreys, assistant superintendent of the Royal Horticultural Gardens, Chiswick, as their curator, in succession to Mr. W. B. Latham, who retires at the close of the present summer. Mr. Humphreys, who is thirty-five years of age, served his apprenticeship with Messrs. Dickson, of Chester, and in 1887 was appointed Arboretum propagator and under-foreman at the Royal Gardens, Kew. In this capacity, the propagation of all the hardy trees, shrubs, and Roses was under his care. He was also engaged in remodelling the old shrubberies and in the removal of large trees. Whilst at Kew he was awarded high certificates for geographical botany, organography, and systematic botany, and chemistry and physics. At the close of 1892 he went to take up the office he now holds at Chiswick. Mr. Humphreys goes to Edgbaston in October, and will be ready to advise and to carry out an important scheme of rearrangement of the shrubberies and borders of the Gardens, a work which will occupy a great deal of attention for two or three years.

The Horticultural Club.

Excursion to Windsor.

The annual excursion of members of this club and their friends took place on Thursday, the 16th instant, and despite the somewhat unfavourable state of the weather, was greatly enjoyed. The party, about eighty in number, met at Paddington terminus, at 10 a.m., and proceeded in two saloon carriages to Windsor, where, thanks to the invaluable aid and management of Mr. Harry Veitch, who kindly undertook the arrangements, and the great courtesy of Mr. Nutt, the architect, Mr. Mackellar, the gardener, and Mr. Tait, the farm steward, the castle, the grounds, and the splendid collection of cattle were all inspected in turn under the best of auspices.

The club, thanks to special permission accorded by His Majesty the King, enjoyed the unusual privilege of visiting the private gardens as well as those more generally open to inspection, and it need hardly be said were delighted, not only by their beautiful design and arrangement, but also by the perfection of the order in which they were kept. So great, indeed, was the pleasure, that the fortunately transient showers and generally dull and threatening weather formed practically no bar to enjoyment. On arriving at Windsor some of the party elected to drive through and around the splendid park; the major number, however, deterred by the threatened downpour, elected to visit the interior of the castle, and although the state apartments were not available for inspection, a tour through St. George's Chapel, the Memorial Chapel, and other adjuncts of the castle itself was greatly enhanced by the presence of Mr. Nutt, who very kindly acted as cicerone to the party, pointing out with the finger of an expert the special points of architectural and historical interest.

To those who drove round the park the beauty of the scene was heightened rather than otherwise by the freshness imparted by the showers, the atmospheric effects in the long vistas of the avenues being charming. At one o'clock the party lunched at Messrs. Layton's, and subsequently were conducted over the gardens by Mr. Mackellar, passing through the private ones aforesaid, and thence to the dairy, viewing a fine collection of cows, and finally reaching Frogmore. A capital tea had been arranged by special permission in one of the Royal conservatories, after which a couple of hours were spent in the kitchen and other gardens, and eventually, under Mr. Tait's kind supervision, the prize cattle were paraded for the visitors' benefit, the party then being driven back to Windsor to dinner at Messrs. Layton's, which was in every respect satisfactory.

Mr. Harry Veitch presided, and after the toast of "The King" had been duly and gratefully honoured, the healths of Messrs. Nutt, Mackellar, and Tait, the two latter gentlemen being present, were proposed and drunk with enthusiastic recognition of their kind contributions to the enjoyment of the day, the function closing after a few words from Mr. Hunt, a visitor from

the Antipodes, with a similarly well deserved recognition of Mr. Harry Veitch's highly successful efforts to make it a red-letter day in the annals of the club. The party then broke up, returning to London as they came, and unanimously declaring that, had the clerk of the weather worn the sunniest of smiles, they could not possibly have enjoyed themselves more.

Vegetable Notes: Carrot Failures.

Whether it is a common cause of complaint or not can be known only by correspondence, or by those whose business and privileges take them into widely separated areas, but in this locality, at any rate, Carrots are an extremely partial crop. Sowing after sowing has been made without any, or but poor, return, and at the present time there is a difficulty in meeting the daily demands of the kitchen. The fault does not lay with the seed, for this, in some instances, came up well; indeed, in my case, the main crop sowing for a time was most hopeful.

The site was fresh to Carrots, the winter crop being cleared, the ground was dug, broken finely, the seed at once sown, and the surface well rolled. All went well for a time, when a change from a dry to a wet period, the Carrots daily made backward instead of forward strides, until at length an isolated plant here



Mr. Thomas Humphreys.

and there only remained. The same thing happened with the earlier Carrot beds, except those in frames, and the first outdoor-sown. Soot, lime, nor salt afforded any remedy, the frequently recurring and heavy rains of June putting these out of use with the usual early despatch.

In my case I attributed the losses to the tormenting slug, which have been so prevalent this year. Large earthworms probably did much in reducing the crop, and adding to the troubles already too much in evidence. I have only seen one good main crop Carrot bed, and this occurred on heavy land. The failure of the earlier sowings enforced the necessity of continued effort. Ground cleared of early Potatoes has been sown with Early Horn varieties, and so far these appear safe and progressive. Since these seeds were sown the weather has been dry, affording conditions unfavourable to slug life on the ground surface.

Watering of the seed drills has been a daily routine with the object of affording a means of rapid progress, but it will not be possible to keep up a supply, only on a limited scale. Some gardeners are inclined to the belief that neither slugs nor worms are the source of trouble, but the Carrot louse or fly. This theory is of doubtful truth.

It would be interesting to learn from readers of the Journal whether similar experiences have been met in other districts and counties, or whether the complaint is simply a local one. Mr. A. Dean, whose experimental work carries him over a large extent of garden, may be able to afford proof of the prevalence or otherwise of this Carrot scarcity and scourge. Except for winter use, I prefer small sowing at intervals, rather than large ones made at one, or at the most, two, periods of the year. Large Carrots for ordinary home supplies are not so desirable as small tender roots, hence frequent sowings, which often make an easier subject of routine, are adopted, and usually with more all round satisfaction.—W. S.



Concerning Roses.

Roses, which form one of the greatest of the floral attractions of this season of the year, have a singular connection in old folklore with death. Camden, in his "Britannia," published in 1603, writes:—"There is a classical custom observed time out of mind at Oakley, in Surrey, of planting Rose trees on the graves, especially of the young men and maidens, so that the churchyard is full of them." It is the more remarkable since it was anciently used in this connection both among the Greeks and Romans, who were so very religious in it that we find it often annexed as a codicil to their wills. The Romans, of course, were famous for their love of Roses, and used them in huge quantities for decoration purposes at their banquets, and this love for the flower pursued them to their tomb. Among modern nations, the Turks display remarkable affection for Roses, which sprang, according to their legend, from the perspiration beads which dropped from Mahomet's forehead. They also employ them largely in decorating graves.

Irish Anemones.

Undoubtedly the finest strain amongst the Coronaria section are the St. Brigid Anemones. There is really nothing to equal them for size of bloom, brilliant delicate colourings, and lasting qualities. While writing this I am admiring a bed of them that is still continuing to open out quantities of blossom, and for beauty of colouring I have seen nothing to equal them this summer yet. In this district (North Shropshire) they are not much grown, and this one is the admiration of the immediate neighbourhood. The St. Brigid is a variety that can easily be grown from seed, which should be procured at once and sown immediately to produce flowers next spring. The seed being very light, of a fluffy nature, should be well mixed with sand to separate them and facilitate an even distribution when sown. They are a very hardy variety, increasing quickly, bearing mostly flowers of a semi-double form, and make an ideal spring garden flower. For cutting for decorative purposes they are also extremely useful, lasting a long time in water, and with their great variety of colours being adaptable to almost any required shade.—J. W. J., Oswestry.

The Effect of Light in Animal and Plant Life.

I note the very interesting and very able article in your last issue, by Dr. James Weir, in which he describes the effect of light in plant and animal life with but one probable error, which I shall endeavour to point out. He says, among other things: "Flammarion's beautiful experiments at the Climatological Station at Invisy have shown beyond question of doubt the widely different effect of the red and violet rays on plants. The plants chosen were of the genus Mimosa, or Sensitive Plant, and were subject to the same thing, with this exception: that some were reared beneath dark-blue glass, and others beneath the red. In four months the plants reared under the red glass had attained extraordinary development, while those subjected to the violet rays had made no progress whatever. Similar effects were noted in the case of Strawberries and numerous other plants, trees, and shrubs. The plants from beneath blue glass did not die, but seemed to remain in a dormant condition, without growth or further development. Zacharamietz, of Vacluse, has also shown that plants are strongly affected along the lines of rapid growth and development by red and orange rays. As early as 1883 I demonstrated and published the fact that typhoid fever germs would not live when subjected to the blue and violet rays." From the foregoing we get the impression that plants under a red glass are subjected to red rays of light, while the reverse must be true, as the red glass has absorbed all the red rays of light, and the remaining only have penetrated. Who has not observed that in a dark photographic room, where a red light is used, anything therein which is red will appear white? for there are no red rays in the room, all being absorbed by the red paper through which the light has filtered.—E. RITCHSON (in "Scientific American").

A Heavy Cantaloup.

I cut a Melon (Cantaloup Noir des Carmes) to-day which weighed 14½ lb. I have grown a lot of Cantaloups, but this is the heaviest that I have cut.—ARTHUR BOWMAN, The Gardens, Manor Heath, Halifax, July 18.

The Dahlia as a Vegetable.

The Dahlia is now cultivated in Europe for its flower, but according to a recent writer, it was first introduced there for its root as a vegetable. The Dahlia bulb, when roasted and eaten, is wholesome and a substitute for the Potato.

New Single Roses.

Three new Roses have just been placed on the market called Irish Brightness, Irish Pride, and Irish Star. Like the much-admired novelties of last year—Irish Glory, Irish Modesty, and Irish Beauty—the new Roses are perpetual flowering singles of great charm and beauty.

Orchids as Fodder.

In Chicago the other day a messenger boy put a basket of Orchids, worth £8, on the sidewalk while he attended to some other affair, and an old horse standing by made a meal of them. The Orchids were probably worth more than the horse; and that is the costliest thing in luncheons yet recorded in the annals of the stable.

Carnations.

The Carnation (*Dianthus Caryophyllus*) is one of the most interesting flowers of the garden, firstly because of its great variety, all having come from the little single-flowered species which is still preserved alongside its grandly developed descendants; and secondly, because of the beauty of the multifarious sorts and their characteristics in growth in habit. We figure to-day a selection of Flaked and Self Carnations. The Carnation is divided into three main groups by florists, viz., Bizarres, Flakes, and Selves. The Bizarres are sub-divided into crimson, pink, purple, and scarlet flowered; Flakes into purple, rose, and scarlet. Bizarres are variously coloured or spotted or striped with two or three distinct colours on a clear ground. Flakes have a pure ground, flaked with one colour only the entire length of the petal. Picotees are a section of Carnation classified according to the breadth and colour of the edging, and also the body-colour of the petals. Show, Stage, or Fancy Carnations are one and the same, and these are named yellow-ground or white-ground Fancies. The former are exceptionally beautiful.

The propagation of Carnations by layers is now being practised, though the work will not be general for a week or more. Cross-fertilisation for securing new seedling forms is very interesting work, and can now be undertaken.

Trees and Shrubs in an Isle of Wight Garden.

The following notes are sent by Captain Dawley, Buckingham Villa:—*Cæsalpinia japonica*, most beautiful, 18ft through, with forty blooms present time (June 25); *Edwardsia grandiflora*, flowered profusely in spring, 25ft high.

Myosotidium nobile, just out of flower, a fine plant; *Embothrium coccineum*, a young plant, doing well; *Lapageria roseum* and *album*, under glass, against north walls and under trees, all vigorous in growth and flower.

Lonicera Hildebrandti, vigorous in growth, has not flowered; *Cistus formosus*, fine in bloom; *Carpenteria californica*; *Buddleias Colvilli* and *madagascariensis* each growing vigorously; *Physianthus albens*, flowers on west wall, vigorous; *Sollya heterophylla*, blooming in greenhouse, plant out of doors not yet flowered; *Calochorti*, very successful.

Bamboos making good growth; varieties: *nobilis*, fine specimen; *Simoni*, *nigra*, *viridi-glaucescens*, *nitida*, *Castlioni*, *Quiloi*, *henonis*, *palmata*, and *Arundinaria japonica*.

Desfontainia spinosa; *Photinia serrulata* and *P. japonica*; *Raphiolepis ovata*; *Crinodendron Hookeri*, just out of flower; *Bignonia grandiflora*; *Cypripedium spectabile*, strong clumps, very strong in bloom; *Mandevilla suaveolens*.

Abelia rupestris and *A. floribunda*; *Gerbera Jamesoni*, has flowered out of doors for four years; *Crinums* and *Lilies* (varieties); *Poincinia Gilliesi*; *Disa grandiflora*, doing well, to flower in August; *Dimorphotheca Eckloni*, new composite; *Romneya Coulteri*; *Clematis Davidiana*; *Hedychium Gardnerianum*, out of doors; *Irises* in varieties; *Iris Kämpferi*; *Water Lilies*, varieties; *Lotus peliorhynchus*. All subjects appear to be thriving.

Societies.

Royal Horticultural, Drill Hall, July 21st.

The exhibition of the National Carnation and Picotee Society being held in conjunction with that of the "Royal" on this occasion, the latter's show was much limited. A very large number of visitors were present, and a paper on the horticultural aspects of New Zealand was read in the afternoon. This we shall give further notice in our next number.

Orchid Committee.

Messrs. Hugh Low and Co., Bush Hill Park, Middlesex, had *Cattleya Mendeli* varieties: *C. Harrisoni alba* (F.C.C. plant), *Lælia majalis*, and *C. Mossiæ Wagneri*. Thos. Rochford and Sons, Ltd., Turnford Hall Nurseries, had white flowered *Cattleya Gaskelliana*, and *Cattleya Mendeli* King Edward VII. (a pure white with an orange throat). Both the plants were much admired. Gurney Fowler, Esq., staged *Renanthera Storei* (a fine branching inflorescence of scarlet-crimson flowers), and also *Eulophiella Peetersiana*.

Fruit and Vegetable Committee.

The Fruit Committee had a number of small entries before them, particularly good being a dish of Peach *Libra*, exhibited by Mr. Taylor, of Hampton, Middlesex, a handsome fruit after *Barrington* type.

Messrs. Cross and Son, Daffodil Nurseries, Wisbech, staged Early Victoria Apple (quite green). Melon *Lilburn Favourite* came from Mr. R. Mathers, Abbey View, Kelso, but received no award. What was called Lemon Cucumber came from Hobbies Ltd. Gooseberry *Grouville Giant* ("a great bearer of very large dessert berries," and of grand flavour) came from Mr. H. Becker, Imperial Nurseries, Jersey, and this is a fine dark bronze yellow variety. Mr. H. Becker, of Jersey, sent Tomato *XL All* (a fine medium sized fruit).

Strawberry President *Loubet* from J. Veitch and Sons, Ltd., seemed a first-rate fruit, being large and very dark red. The fruits are firm. *Waterloo* and *Lord Napier* are the parents. Messrs. Veitch received a first-class certificate for a well-cultivated basketful of Loganberry fruits, quite an inch and a half in length, and of a rich dark crimson. The flavour is tart yet agreeable.

Messrs. John K. King and Sons, Coggeshall, contributed a goodly selection of culinary Peas, among which we noted *Centenary*, *Gradus*, *Daisy*, *Masterpiece*, *Mammoth Sugar*, and others to the number of fifty dishes. (Silver Banksian Medal.)

Floral Committee.

Messrs. W. Bull and Sons, King's Road, Chelsea, staged a collection of new *Fuchsias* in 6in-pots. The best varieties were *Lena*, *Muriel*, *Nautilus*, and *Julius*. It is strange to note how little improvement there is being made in this plant. The modern varieties are little, if any, better than those of a couple of decades ago.

Messrs. Phillips and Taylor, Bracknell, contributed a small exhibit of *Spiræas*, cut *Carnations*, and *Nymphæas*. The *Water Lilies* included *N. Sanguinea*, *N. M. Rosea*, *N. Gloriosa*, *N. Chromatella*, *N. Sulphurea*, *N. Lucida*, and *N. Carnea*.

From Messrs. J. Hill and Son, Barrowfield Nurseries, Lower Edmonton, came a nice exhibit of *Nephrolepis Fosteri*, a Fern likely to be useful for general decorative purposes, also a nice collection of *Adiantums* in small pots with a few forms of *Selaginellas*. (Silver Flora Medal.)

Ferns were again exhibited by Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, who staged thirty-six species and varieties of *Gymnogrammas*, chiefly in small pots. The most noteworthy being *G. multiceps*, *G. Alstoniæ*, *G. Mayi*, *G. grandiceps superba*, *G. chrysophylla superba*, and *G. elegantissima*.

An interesting exhibit of *Water Lilies* came from L. Currie, Esq., Minley Manor, Farnborough. The flowers were displayed in pans, with a background of Bamboos, and without doubt they were splendidly grown. The most conspicuous were *N. tuberosa*, *N. Marliacea carnea*, *N. M. albida* (in grand form), *N. Laydekeri lilacea*, *N. Ellisiana*, *N. M. Chromatella*, and *N. Laydekeri rosea*. (Silver Flora Medal.)

Messrs. Paul and Son, Cheshunt, contributed a fine display of new *Roses* arranged in vases. Though the exhibit contained many old forms, the new forms included *Lady Clanmorris*, *Frau Karl Druschki* (in grand form), *Lady Battersea*, *Billiard et Barre*, *Tea Rambler*, and *Bessie Brown*, the whole forming a fine exhibit.

From Messrs. Dobbie and Co., Rothesay, came a capital strain of the old fashioned Sweet William, known as the *Auricula eyed*. The strain is undoubtedly a good one, and selected with great care. The strain was commended.

Messrs. Jas. Veitch and Sons, Ltd., made an extensive and varied display. A group of *Java Rhododendrons*, beautifully flowered, attracted much notice, a few of the most noteworthy being *Ne Plus Ultra*, *Princess Alexandra*, *R. Javanicum*, *Lord Wolseley*, *Indian Chief*, *Imogene*, and *Monarch*. The herbaceous department was represented by a group of large bunches, in

which the following were noted as being especially good: *Dracocephalum virginicum album*, *Achillea eupatoria*, *Centaurea ruthenica*, *Sidalcea Listeri*, and *Lythrum roseum superbum*. The same firm also contributed a nice display of Sweet Peas, in which all the leading varieties were represented. (Silver Flora Medal.)

Begonias were well represented by Messrs. H. Cannell and Sons, Swanley, who staged a nice collection of double varieties, in which were noted *Lady Esther Smith*, *Col. Plumer*, *Mrs. Thompson*, *Lord Stradbroke*, *King Humbert*, *Lady Dundonald*, and *Countess Bremer* as being the best. *Bedding Begonias* were also staged in 5in pots. The colours are clearly defined and the plants most floriferous.

From Mr. Amos Perry, Winchmore Hill, came a nice display of hardy flowers and *Water Lilies*. In the former were nice representative bunches of *Achillea millefolium rubrum*, *Lilium Parryi* and *L. Bloomerianum magnificum*, *Spiræas* in variety, and *Heuchera sanguinea* (Walker's var.). In the *Nymphæas* were to be found *N. Odorata Maxima*, *N. Gladstoniana*, *N. Gloriosa*, *N. Chromatella*, *N. Robinsoni*, *N. Marliacea carnea*, *N. M. albida*, and *N. Andreana*.

Messrs. Barr and Sons, Covent Garden, were represented by a fine exhibit of hardy flowers and a few *Nymphæas*. The best of the hardy flowers were *Phloxes* in variety, *Brodiaea Murrayana*, *Lilium Browni*, *L. Martagon dalmaticum*, and *L. Humboldtii magnificum*, *Astilbe sinensis*, *Iris Kämpferi* in variety, with *Gaillardias* and *Alströmerias* in variety, also a Japanese model garden.

A grand display of decorative *Roses* was that from Messrs. W. Paul and Son, Waltham Cross. The day evidently suited the *Roses*, for they were in grand condition, the most noteworthy being *Frau Karl Druschki*, in grand condition, *Enchantress*, *Madame Abel Chatenay*, *Madame Ravary*, *Souvenir de William Robinson*, *Souvenir de J. B. Guillot*, *Chameleon*, *Dainty*, *White Maman Cochet*, *Floribunda*, and last, but not least, a new *Tea*, *Earl of Warwick*, a *Rose* of great promise. The flowers are of good shape; cream flushed with rose will best describe the colour. (Silver Flora Medal.)

Mr. A. F. Dutton, The Nurseries, May Place Road, Bexley Heath, once more demonstrated his ability to produce tree *Carnations* in grand form. The blooms were staged in huge trumpet vases, and the varieties represented were *Mrs. T. W. Dawson*, *D. B. Crane*, *Royalty*, and *Madame Melba*. The exhibit created great interest amongst the gardening fraternity present.

A group of Sweet Peas came from Mr. Black, gardener to *Lady Plowden*, *Aston Rowant*, *Wallingford*. The blooms were undoubtedly good, but the absence of greenery in the jasper vases effectually killed anything approaching effectiveness.

Messrs. W. Cuthush and Son, Highgate, set up a pretty group of *Carnations* in pots arranged with Bamboos, Palms, and Ferns. The large semicircular group of *Malmaisons* included nice plants of *Nautilus*, *Princess of Wales*, *King Oscar*, *Lady Rose*, *President Loubet*, *Mr. Trelawny*, *President McKinley*, and *Monk*. The border varieties comprised a good collection, chiefly composed of yellow ground sorts. (Silver-gilt Banksian Medal.)

Messrs. J. Peed and Son, West Norwood, exhibited a group of *Carnations* in pots, nicely arranged with Bamboos and foliage plants, the most conspicuous of the *Carnations* being *Cecilia*, *Winnie Peed*, *Edward VII.*, and *J. C. Knight*. A few *Malmaison* varieties completed the display.

From Messrs. R. H. Bath, Limited, Wisbech, came a stand of *Carnations* in pots and in a cut state. The arrangement, however, was far below the average of R.H.S. exhibits. The best varieties were *George Alexander*, *Albatross*, *Lucifer*, *Trojan*, and *Volunteer*.

Messrs. James Veitch and Sons, Limited, Chelsea, made a nice exhibit of *Carnations* in pots, arranged with Palms and *Adiantums*. The most conspicuous varieties were *Galatea*, *Trojan*, *Charles Martel*, *Mrs. Charles Baring*, *Rizzio*, *Lord Roberts*, *Quintin Durward*, and *Argosy*.

Certificates and Awards of Merit.

Asparagus plumosus cristata (Sir T. Lawrence).—A heavily crested plumose form, inclined to fasciation. It can be grown dwarf and bushy. A.M.

Begonia, Marie Bouchett (W. Greenwell, Esq.).—A form of the *B. Boliviensis* type, with abundance of large, tassel-like, crimson-scarlet flowers on long sappy shoots. The plant was shown in a basket. A.M.

Cypripedium × *Ultor* (Sir F. Wigan, Bart.).—Parentage: *C. Lawenceanum* (female), *C. Sanderianum* (male). The long, narrow sepals of the latter are evident. The pouch is chocolate-brown, the dorsal sepal greenish with dark lines. A.M.

Lælio-Cattleya × *Bletchleyensis illuminata*.—Parentage: *L. tenebrosa* × *C. gigas*. The lip is very handsome and prominent, being velvety crimson, heavily suffused with mauve at the edges. The sepals and petals are rosy-mauve and bronzy. F.C.C.

Lilium elegans, Peter Barr (Barr and Sons).—A rich golden-orange form. A.M.

Pteris metallica (H. B. May).—From a general, superficial view, this resembles *Polypodium vulgare*. The foliage bears three pinnales on either side, the lower two joined, and is leathery, of a dark green colour. A.M.

National Carnation and Picotee, July 21st.

The metropolitan, or home counties, section of the N.C. and P.S. held the annual exhibition in the Drill Hall, Westminster, along with that of the R.H.S., on Tuesday last. At the luncheon in the Hotel Windsor, Mr. Martin R. Smith, president of the society, who occupied the chair, said that this was certainly the finest exhibition the members had brought together, and competition, as our report shows, was exceptionally keen. The society has now four hundred members or thereabouts, and a good many have joined this year. The chairman referred to a disease that had affected his plants, whereby the flower stems rot off at the collar. He said the society had no one on whom to fall back for advice in such emergencies, but he did not name Drs. M. C. Cooke and W. G. Smith, or Mr. George Massee, each of whom do much honorary service in their special branches of botanical study. There were more people at the luncheon than we ever remember to have seen before.

First Division.

For twenty-four Carnations, dressed on cards, bizarres and flakes, not less than twelve varieties, there were two competitors, both staging strongly. The first prize was awarded to F. Wellesley, Esq., Woking, who was undoubtedly in fine form. The varieties employed were G. Lewis (premier flake), J. S. Hedderley (premier bizarre), R. Houlgrave, Merton, George, Master Fred, Robert Lord, W. Skirving, Sportsman, G. Melville, Arline, Guardsman, J. D. Hex-tall, Admiral Curzon, T. Lord, and H. Shoosmith. M. R. Smith, Esq., Warren House, Hayes, Kent, was second, his best varieties being Adonis, Flavia, Elphinstone, Sweet Nell, Markham and Nestor, nearly all seedlings.

In the class for twenty-four selfs not less than twelve dissimilar varieties there were no less than six competitors, most of which were above the average quality. Martin R. Smith, Esq., Warren House, was placed first with a level exhibit. The varieties were Swashbuckler, Cecilia, Sir Bevy, The Maid, Gulnare, Daffodil, Barras, Hildegard, Duke of Norfolk, Helen, Blanche, Kara, Floradora, Mrs. Eric Hambro, Agnes Sorrel, Bomba, Anne Boleyn, Waldemar, Roderie, and Don John. F. Wellesley, Esq., made a good second, the best varieties being Agnes Sorrel, Orpheus, Almoner, Mrs. A. Gilbey, Cecilia, Seymour Cochrane, and Benbow. Messrs. W. Artindale and Son, Ranmoor, Sheffield, were third; and Mr. C. Turner, Royal Nurseries, Slough, brought up the rear.

The premier class for twenty-four blooms, dressed on cards, Fancies only, there was a fine entry of six exhibits, Mr. F. Wellesley being a splendid winner for first place, the varieties being Hildago, Charles Martel, Monarch, Paladin, Argosy, Perseus, Amphion, Voltaire, Primrose League, Guinivere, Queen Bess, Gipsy Queen, Ormonde, Mrs. F. Wellesley, Ossian, and Charles Martel, a really grand exhibit. Mr. Martin R. Smith followed, his best varieties were Lily Duchess, Bedimere, Royal George, Athelston, Cavalier, Ramoses, and The Seer. Messrs. Blackmore and Langdon were third with a creditable display, and Mr. C. Turner brought up the rear.

Class 4 was for twenty-four Picotee blooms, dressed on cards,



Southampton Show: Eighteen distinct Roses. (See page 75.)

white grounds not less than twelve varieties. Here there were four entries, and the awful collars, so orthodox, and yet so atrocious, that they simply killed the ground colour, but it is to be hoped an alteration will shortly be made in this direction. Again Mr. F. Wellesley distinguished himself by leading off with a nice exhibit. The varieties were W. H. Johnston, Fortrose, Brunette, Amy Robsart, W. G. Dickson, Nellie, Ganymede, Muriel, Thos. William, Mrs. Payne, Somerhill, Clio, John Smith, Miriam, Favourite, and Fanny Tell. Mr. Martin R. Smith made a good second, his best varieties being Tip Top, Brownie, Miss Sophie Graham, Ganymede, Fortrose, and Lady Louise; Mr. Chas. Turner was third with smaller blooms, while Messrs. W. Tulpin and Sons, Newton Abbot, were fourth.

For twenty-four Picotees, dressed on cards, yellow grounds, there were again five entries. In this case Mr. Martin R. Smith secured first honours, with a fine exhibit, the varieties were Gronow, Badoura, Peri, Lucy Glitters, Espoir, Isolt, Schiller, Chryseis, Verena, Launce, Leonora, Koh-i-Noor, Speranza, Dalkeith (premier yellow ground), Lord Napier, Sabrina, and Mrs. W. Heriot. Mr. F. Wellesley was a close second, the best blooms were Badminton, Gertrude, Heliodorus, Lady St. Oswald, and Mrs. Durant; Messrs. W. Artindale were third, and Mr. C. Turner brought up the rear.

For six self blooms, one variety, dressed on cards, there were six entries, Mr. Martin R. Smith being first with a good yellow, named Daffodil; Mr. F. Wellesley followed with nice blooms of Germania; Mr. C. Turner came third with Sir Bevy, and Messrs. Artindale and Sons, Sheffield, fourth, with Much the Miller.

For six blooms, yellow or buff ground Fancy Carnations, there was a good entry of five, Mr. F. Wellesley first with Mrs. F. Wellesley in fine form; Mr. M. R. Smith being a good second with King Solomon; while Messrs. Blackmore and Langdon were third with Richness, a variety of grand colour; the fourth place falling to Messrs. W. Artindale and Son with good typical blooms of Monarch.

Class 8, for six blooms, dressed, other than yellow or buff, secured five entries, Messrs. Blackmore and Langdon being first with Millie; Mr. F. Wellesley being second with the same variety; Mr. M. R. Smith taking third with Ivo Sebright, while Messrs. Tulpin and Sons, Newton Abbot, were fourth with Persimmon.

Five entries were staged for six yellow ground Picotees, one variety, the first place being taken by Mr. Martin R. Smith with good blooms of Mrs. Walter Heriot; Mr. F. Wellesley was second with Lady St. Oswald; Messrs. Artindale and Son were third with Childe Harold, and Mr. C. Turner fourth.

Class 10 for twelve distinct varieties of selfs, yellow grounds and Fancies, without dressing or cards. There were six exhibits in this class, and they made a far better impression than the classes just enumerated. The blooms looked more natural, and certainly made a better display than their orthodox neighbours. The first prize was allotted to Mr. Martin R. Smith, whose varieties were Lucifer, Hengist, Red Rover, Berengaria, Cavalier, Cecilia, Comet, Hildegard, Goldlocks, Sir Bevy, Orpheus, and Morning Star. The second prize went to Messrs. Blackmore and Langdon, who had Blanche, Richness, Alma, Argus, and Mrs. Wall in good form. Messrs. W. Artindale and Son were third, and



Southampton Show: Six distinct Roses. (See page 75.)

Mr. F. Wellesley appeared in a new rôle by being last on the list.

The competition in the classes for single blooms was rather appalling to the reporter, the first three winners are given in each case. For scarlet bizzarres the first position was taken by Messrs. Thomson and Co. for Robert Houlgrave; Mr. J. Butt was second with the same variety; Mr. B. Pash third with Admiral Curzon.

For crimson bizzarres Mr. F. Wellesley was first with J. S. Hedderley; Mr. J. Butt made a good second with the same variety, and also third with the same sort. In the pink bizzarres Mr. D. Walker was first with Wm. Skirving; Mr. E. J. Wootten was second with Sarah Payne, and Mr. F. Wellesley third with Wm. Skirving.

Purple flakes were good, and the competition keen, Mr. W. Spencer, jun., being first with Geo. Melville; Mr. J. Wootten second with the same variety, while Mr. Jas. Fairlie was third with Gordon Lewis. Scarlet flakes brought out a strong competition, the first prize bloom being Sportsman, exhibited by Mr. E. J. Wootten; Messrs. Thomson and Co. second with J. J. Keen, and Mr. B. Nash third with Sportsman. In the rose flakes Mr. W. Pemberton was first with Merton, and second also, while Mr. J. J. Keen was third with the same variety.

The self flowers staged as single blooms made a nice display. In the class for white or blush there were twenty-one entries, Mr. R. C. Cartwright came first with Ensign; Mr. A. J. Cook second with the same variety, and Mr. Cartwright third with Much the Miller. Rose or pink varieties also turned up in strong force, Mr. W. H. Parton, jun., being first with Lady Hermoine; Mr. W. J. Wootten being second with a deep rose seedling, and Mr. A. J. Cook third with Bomba.

Scarlet, red, or purple, brought out a heavy team. Mr. W. Spencer was first with a sport from John Wormald; Mr. R. C. Cartwright was second with a seedling, and Mr. D. Walker third with Sirdar. Maroons or purples were not so strongly represented, Mr. E. Charrington taking first with Helen, the same exhibitor being second with the same variety, while Mr. F. Wellesley was third with Mrs. W. Mostyn.

For yellow selfs Mr. E. J. Wootten came first with Almoner; Mr. E. Charrington being second with Germania, while Mr. W. Spencer, jun., was third with the same variety.

For buff varieties, Mr. F. Wellesley took first with Benbow; Mr. R. C. Cartwright taking second and third with the same variety.

The yellow-ground Fancies were extra good, and made a fine display. Mr. B. Nash was first with Monarch; Mr. F. Wellesley second with Mrs. F. Wellesley, and Mr. R. C. Cartwright third with Argosy.

Other Fancies were represented by Mr. D. Walker, taking first with Nestor; Mr. R. C. Cartwright being second with Artemus; and Mr. J. Wootten third with the same variety. Picotees formed a fine feature. The best three exhibits are given in each class for reds, heavy edged. Mr. B. Nash was first with M. D. Anstiss; Mr. J. J. Keen was second with John Smith; and Mr. W. Pemberton third with the same variety.

The light-edged rose or scarlet varieties were strongly staged, Mr. E. J. Wootten being first with Favourite; Mr. W. Spencer followed with the same variety, and Mr. F. Wellesley. The purple heavy-edged varieties were strongly in evidence. Messrs. Thomson and Co. were first with Fanny Tett, Mr. W. Pemberton was second with Amy Robsart, and the third fell to Mr. J. Butt with Fanny Tett.

The light-edged purple varieties were not so numerous. Mr. F. Wellesley being first with Somerhill, Mr. J. Wootten second with Pride of Leyton, and Mr. J. Butt third with Lavennia. Rose or scarlet heavy edges found Mr. J. Wootten first with Fortrose, Mr. J. Pemberton second with Lady Louise, while Mr. W. Spencer, jun., was third with Mrs. Payne.

The yellow ground varieties were superb. The heavy-edged varieties were extremely strong, Mr. J. J. Keen winning first place with Gronow, Mr. M. R. Smith being placed second with Dalkeith; presumably the same exhibitor was third with the same variety.

In the class for light-edged varieties there was also a good competition. Mr. M. R. Smith being first with Lady Hewitt. The second prize had been awarded, and the exhibitor's card scratched off. Mr. B. Nash following with Heliodorus.

For light-edged reds Mr. J. J. Keen was first with Thos. William, Mr. W. Spencer was second with the same variety, Mr. J. Bull third with Grace Darling.

Second Division.

In the second section there were three entries for twelve Carnations, bizzarres and flakes, Messrs. W. Pemberton, Bloxwich, securing first position with a good level board. The varieties staged being J. D. Hextall, Flamingo, Gordon Lewis, Merton, George Melville, Robt. Houlgrave, Wm. Skirving, J. S. Hedderley, Sportsman, Chas. Henwood, Mrs. Rowan, and Geo. Rudd. Mr. W. Spencer, jun., Windsor, was second, his best flowers being Geo. Melville, J. Wormould, and Robert Houlgrave; while Messrs. Thomson and Co., Birmingham, came third.

Class 16 was for twelve blooms, distinct varieties. Here

there were six competitors, Mr. W. Spencer, jun., being first with good representative flowers of Almoner, Barras, Sultan, Helen, and Britannia. Messrs. Thomson and Co. were a good second with Enchantress, Nubian, Mr. Eric Hambro, and His Grace; Messrs. Phillips and Taylor being third.

For twelve Fancy varieties there was again a good entry, Mr. W. Spencer, jun., being first with excellent blooms of Paladin, Voltair, Argosy, Ormonde, and Monarch. Messrs. Thomson and Co. came next, having Argosy, Emperor, Jessie Done, Voltaire, and C. B. Thomson for their flowers. Messrs. Phillips and Taylor being third.

For twelve white ground Picotees there was a good entry of five, Mr. B. Nash, Woking, coming to the front with nice blooms of Mrs. Beswick, Fanny Tett, Little Phil, M. D. Anstiss, Ann Lord, and Mrs. Payne. Messrs. W. Pemberton and Son, Walsall, was second with good clean examples of W. H. Johnston, Fortrose, Charles Hardman, Mrs. Beswick, Gannymede, and Amy Robsart. Mr. W. Spencer was a good third.

For twelve yellow-ground Picotees, distinct varieties, Mr. B. Nash was placed first with a good level box containing Heather Bell, Lady Bristol, Evelyn, Mohican, Hesperia, and Lauzan. Messrs. Thomson and Co. were second, and Mr. W. Spencer, jun., third.

The competition for six self blooms, one variety, was confined to six competitors, Mr. W. Spencer, jun., being first with Mrs. Eric Hambro, while the second prize went to Mr. B. Nash with the same variety, the third prize falling to Messrs. Phillips and Taylor for a yellow not named on the card.

For six blooms, yellow or buff ground, one variety, Mr. W. Spencer, jun., came first with Voltaire in splendid form. Mr. B. Nash was second with Mrs. Tremayne, while Messrs. Thomson and Co. brought up the rear with Voltaire.

The Fancy varieties were not so strong, the first prize going to Messrs. Phillips and Taylor for Ivo Sebright. The second to Mrs. Brookes-Smith, St. Mary's Church, Devon, for Mrs. Brookes-Smith, while Mr. W. Spencer, jun., was third with Muleteer.

The yellow-ground Picotees were represented by six competitors. Mr. H. W. Mathias, Thames Ditton, being awarded first for the Pilgrim, Mr. B. Nash second with Heliodorus, and Mr. W. Spencer, jun., third with Lady St. Oswald.

The six varieties, selfs, Fancies, and yellow-grounds, three blooms each, arranged without any dressing, was decidedly attractive, Mr. S. Morris, Wretham Hall, Thetford, was first, staging in fine style. The varieties were Hildegard, Cecilian, H. J. Cutbush, Daniel Defoe, Hesperia, and Agnes Sorrell. Mr. W. Spencer, jun., was a capital second with Mrs. Trelawny, Eldorado, and Hesperia. Messrs. Thomson and Co. were third.

Mr. C. Turner, Royal Nurseries, Slough, was the only exhibitor in class 48 for a group of Carnations to occupy 50 square feet. The exhibit was awarded second prize.

The competition for brides' and bridesmaids' bouquets was confined to two competitors. Mr. Martin R. Smith secured premier award, while Miss D. Olliver, Tollington Park, came second.

There were five entries for a single vase, Mr. M. R. Smith being placed first for a vase of mixed varieties. Mrs. Hadley, Reigate, came next, while Mr. W. Spencer, jun., was third.

The class for three sprays was well represented, but there was nothing as striking as would have been seen in the nearest florist's window. The first prize went to Mr. W. Spencer, jun., the second was secured by Miss D. Olliver, and the third by Mr. Martin R. Smith.

The buttonholes were a strong class, but Mr. M. R. Smith came first, and Mr. W. Spencer, jun., and Mrs. Hadley followed in the order named.

Certificated new varieties

Carnation, Mrs. F. Wellesley (F. Wellesley).—A good yellow ground Fancy, deeply edged and flaked with shades of red. F.C.C.

Carnation, Speranza (Martin R. Smith).—A beautiful yellow ground, edged with rose. F.C.C.

Carnation, Richness (Messrs. Blackmore and Langdon, Bath).—A Fancy yellow ground variety, richly edged and striped with crimson. F.C.C.

Carnation, Ivo Sebright (M. V. Charrington).—A good rose variety, edged and slightly flaked slate. F.C.C.

Third Division.

Class 25.—For six bizzarres and flakes James Fairlie, Acton, led with the usual sorts; second, D. Walker, Kilmarnock, N.B.; and third, W. E. Wilson, Cannock, there being eight entries. For the six selfs (class 26) there appeared to be fifteen fine entries, the lead going to Mr. Cartwright, of King's Norton; second, D. Walker; and third to H. Parton, jun., King's Norton.

For three Fancies, the order ran thus: Messrs. Charrington, J. Fairlie, and R. C. Cartwright; there being eleven lots. Thirteen sets, however, were forward in class 32, for three Fancies, other than yellow or buff. Mr. Charrington was a splendid first, Mr. Philbrick second, and Mr. Cartwright third. Three yellow-ground Picotees saw Mr. Charrington leading, Dr. A. H. Beadles second, and Mr. Philbrick third. Mr. Cartwright was easily first for three-trebles in any section, Mr. Walker coming second, and Mr. J. Fairlie third.

(Remainder of report next week.)

National Rose, at Glasgow.

The west of Scotland rosarians were fortunate in securing the assistance of the National Rose Society, to aid in holding their exhibition this year. The headquarters of the West of Scotland Society is at Helensburgh, where an exhibition is held annually in July. No doubt the show to have taken place this year would have been in Helensburgh, but it was noticed beforehand that with the National Society joining its forces, there would not be sufficient hall space in that town. A good idea struck the directors, and to get out of the difficulty it was proposed to make Glasgow the centre, and they were fortunate to secure the St. Andrew's Hall there.

The exhibition of Roses on Wednesday last (July 15) was one of the finest ever held in Scotland. The grand hall was a blaze of colour from the wealth of blooms staged. The season, so far, has been a late one, and not only late, but a very curious season all through. The objectionable part of the year was in April, when frost to the extent of 22deg was registered, and snow covering the ground, caused the first shoots to disappear. With such a disastrous early spring, from the exhibition seen last week, one could scarcely have dreamed that such weather had prevailed, which clearly shows that the Rose is a very hardy plant.

It is now sixteen years ago since the N.R.S. came to Scotland, but why should it not come oftener?

NURSEYMEN'S SECTION.—For thirty-six blooms, distinct, the Jubilee Challenge Trophy was carried off by Messrs. Harkness and Co. Their blooms were exquisite, and deliciously arranged. Their back row had (reading from left to right) Mildred Grant, Gustave Piganeau, Bessie Brown, Ulrich Brunner, Madame Lambert, Mrs. Harkness, Her Majesty, Marie Baumann, Madame Marie Verdier, Marie Rady, Lady Mary Fitzwilliam, and Madame Charles Crapelet; second row: A. K. Williams, Maman Cochet, Horace Vernet, Maréchal Niel (fine), Comte de Ludre, K. A. Victoria, Madame Cusin, Souv. d'E. Vardon, Prince Arthur, White Maman Cochet, Fisher Holmes, and Ellen Drew; front row: Mrs. Cocker, Louis Van Houtte, Mrs. Jno. Laing, Duke of Edinburgh, Killarney, Duke of Wellington, Marchioness of Downshire, Jean Soupert, Mrs. Ed. Mawley, Victor Hugo, Niphetos, and Ulster. The second prize fell to Messrs. Benjamin R. Cant and Sons, Colchester, who had a very good stand. They had the following varieties: Her Majesty, Ben Cant (silver medal), Maman Cochet, Caroline Testout, Suzanne Marie Rodocanachi, Mildred Grant, Lady Moyra Beauclerc, Count de Nadaillac, Chas. Lefebvre, Papa Lambert, and Ulrich Brunner; middle row: A. K. Williams, Maman Cochet, A. Carrière, Mrs. Jno. Laing, Marie Baumann, Frau Karl Druschki, François Michelin, Maréchal Niel, Duke of Edinburgh, Madame Cusin, Dupuy Jamain, and Bessie Brown; front row: Duchess of Portland, Fisher Holmes, Jean Ducher, Duchesse de Morny, Mrs. Cocker, Black Prince, Marchioness of Londonderry, M. Bernardin, Medea, Reynolds Hole, Killarney, and Horace Vernet. The third place fell to Messrs. A. Dickson and Sons, Royal Nurseries, Newtownards, who had a good stand, the best noticeable being Ulster (very good), Ulrich Brunner, Bessie Brown, Madame Cusin, Comtesse d'Oxford, Duchess of Portland, Frau Karl Druschki, and Maman Cochet.



Southampton Show: Twelve distinct Roses. (See page 75.)

For forty-eight blooms, the Messrs. Dicksons' had the first place, showing extraordinary blooms of fine colour and form. The second prize was awarded to Messrs. R. Harkness and Co. for a heavy stand comprising Robert Scott, Alice Lindsell, Duchess of Portland (really splendid), Comtesse Ludre, and C. Bernardin. Messrs. D. Prior and Sons, Colchester, had the third place, their best being Killarney, Xavier Olibo (extra fine), Duchess of Portland, Duke of Edinburgh, Mamie, and Her Majesty.

For twenty-four distinct trebles, Messrs. Harkness led with nice blooms of Mrs. E. Mawley, Niphetos, Gustave Piganeau, White Maman Cochet, Mildred Grant, Mrs. Cocker, Killarney, C. Testout, Bessie Brown, M. Brownhouse, Madame Crapelet, G. Harkness, Lady Mary Beauclerc, and Alfred Colomb. Messrs. A. Dickson and Sons followed with a good second exhibit, their best being Mildred Grant, Lady Mary Beauclerc, Tom Wood, Mrs. Ed. Mawley, Lady Clanmorris, Frau Karl Druschki, Ulster, and Bessie Brown. The third ticket was secured by The King's Acre Nurseries, Hereford, in the stand being nice blooms of Mildred Grant, Frau Karl Druschki, Mrs. Ed. Mawley, Mrs. John Laing, and Maman Cochet.

In division B., for thirty-six blooms, fine flowers were to be seen, and here Messrs. Townsend and Sons, Worcester, had first points. Messrs. J. Jefferies and Son, Cirencester, came second with great quality, the set comprising M. Grant, Silver Queen, F. A. Lesseps, Ulster, R. Jacobs, Baron Bonstettin, A. Colomb, Heinrich Schultheis, Lady Moyra Beauclerc, B. Joubert, and Maman Cochet. For third prize, Messrs. David Robertson and Co., Mossend Nursery, Helensburgh, had the right award, securing a place for the Scottish nurserymen in the show. With such weather conditions he has suffered from it was gratifying to see such magnificent stuff in his stands. He had extra fine blooms of Medea, Mrs. Ed. Mawley, C. Testout, Duchess of Portland, Mildred Grant, and Madame Marie Verdier.

In the same division for sixteen distinct varieties, three blooms of each, Messrs. Townsend had the place with creditable blooms, staging the popular sorts such as we have named. For second place, Mr. Geo. Prince, Oxford, won; and Messrs. Jno. Jefferies and Sons took the third ticket.

Coming to the Tea and Noisette section Mr. Prince had the first award for the class of eighteen distinct, staging his usual fine specimens of White Maman Cochet, Ernest Metz, Comtesse de Nadaillac, Innocente Pirola, C. Koch, Maman Cochet, Muriel Graham, Mrs. Ed. Mawley, Miss E. Brownlow, Medea, Souv. de S. A. Prince, La Boule d'Or, Golden Gate, and E. V. Hermania. Messrs. F. Cant and Co., Colchester, ran second place, having good blooms of Bridesmaid, E. de Lyon, M. Cusin, Jean Ducher, Madame de Watteville, Madame Hoste, and F. Kruger. Messrs. D. Prior and Son took the third ticket with fine specimens of Mrs. Ed. Mawley, and Cleopatra.

For twelve blooms, in same section, Messrs. J. Jefferies easily had the first place, Messrs. Hugh Dickson second, and Mr. J. Mattock, Oxford, third; and among their specimens we noticed extra blooms



Southampton Show: Nine distinct Roses. (See page 75.)

of C. Koch, Comtesse de Nadaillac, Mrs. Ed. Mawley, and C. Mermct.

In the open section for nurserymen and amateurs, there was keen competition, and extra quality of blooms were staged. For twelve new Roses, Messrs. Alex. Dickson were placed first with W. Shean, Mildred Grant, Connaught, Dean Hole, Alice Lindsell, Florence Pemberton, Westminster, Alice Graham, Edith D'Ombraïn, Duchess of Annesley, Duchess of Portland, and Lena. Messrs. Frank Cant and Co. were placed second, and had Muriel, G. Harkness, L. Poiret, Boadicea, Duchess of Portland, Mamie, E. D'Ombraïn, Souv. de Pierre Notting, Lady Moyra Beauclerc, M. Grant, Boadicea, and Frau Karl Druschki. The third place fell to Messrs. B. R. Cant and Sons, who had extra blooms of M. Guillot, M. Grant, Frau Peter Lambert, Madame H. Bengier, P. von Goldenberg, Ben Cant, Frau Karl Druschki, Beauty, E. D'Ombraïn, and Duchess of Portland.

For twelve of any white or yellow Rose, Messrs. Alex. Dickson and Son led with Bessie Brown; Mr. Hugh Dickson, who was second, had Duchess of Portland; and Mr. Prince had good specimens of White Maman Cochet. In the class for twelve of any light pink or rose-coloured variety, Mr. Prince secured first place with Mildred Grant; Messrs. F. Cant and Co. came second with the same; and Mr. Hugh Dickson staged good blooms of Ulster, scoring third.

For twelve of any light or dark crimson, Messrs. B. R. Cant and Sons staged first, having Ben Cant on the stand, which is indeed a very pretty Rose. Messrs. Townsend had second place with X. Olibo, which was admirably shown; and Messrs. Alex. Dickson got the third place.

The exhibition Roses in vases were a feast of magnificent specimens. For twelve, distinct, to include not more than six varieties of Teas or Noisettes (space 6ft by 4ft), Mr. Prince was first; Messrs. A. Dickson and Sons second; with Messrs. Townsend following.

For new seedlings, in not less than three trusses, the gold medals and cards of commendation fell to Messrs. A. Dickson and Sons, Messrs. B. R. Cant and Sons, and Hugh Dickson. Messrs. A. Dickson staged Mrs. David McKee, a yellow Hybrid Tea, which is indeed a most promising variety.

Messrs. B. R. Cant and Sons staged a new climbing Polyantha named Blush Rambler, an admirable addition to this class.

NEW ROSES.

Mr. Hugh Dickson had a Hybrid Perpetual Rose named after himself. It is a very bright and brilliant scarlet-crimson, very intense. A card of commendation was also awarded to Mr. Hugh Dickson for a new Hybrid Tea, J. B. Clarke, a very deep crimson, very heavy veined with blackish maroon; growth vigorous, possessing well formed buds with massive foliage. It is a much-needed variety, and a great future lies with this Rose.

Mr. Dickson also staged a new Garden Rose named Dorothy, which is a splendid sort, possessing the type of Caroline Testout.

A card of commendation also fell to Messrs. A. Dickson and Sons for a splendid new Tea named Dean Hole, a most beautiful Rose; and for a Hybrid Tea, Duchess of Westminster, a very promising variety indeed.

For twelve Teas, distinct, three blooms of each, Mr. Prince staged first class blooms, and deserved the lead; while Mr. F. Cant came second, with Messrs. A. Dickson and Sons following.

In the "Garden" or decorative section many fine specimens were exhibited, and were greatly admired. Exhibits in this section are arranged so as to show as far as possible the foliage and habit of growth of each variety. Every fine type of the Polyantha, Moss, Provence, and single flowered varieties were staged. For eighteen distinct varieties Mr. J. Mattock had first award, staging Mme. Falcot, Amazon, Homère, Lady Battersea, Marjorie, Mad. A. Chatenay, Jules Grolez, Sov. de Cath. Guillot, Marquis de Salisbury, Helen, Liberty, Lucida Plena, W. A. Richardson, Irene Watt, Papillon, Killarney, Crimson Rambler, and Macrantha. Messrs. F. Cant and Co. received second award; the third place fell to Messrs. Paul and Son, Cheshunt, Herts, who staged a fine stand of Perle d'Or, Rubin, Camoens, and White Pet.

AMATEURS.

AMATEURS.—In the amateur section there was a great display, and the finest of all Roses were to be seen. Some time elapsed before judgment could be given in many classes. In these classes all the Rose champions had entered. For twenty-four blooms the challenge trophy fell to Mr. E. B. Lindsell, Hitchin, who staged an enormous, weighty stand, which possessed fine colour. In this stand the silver medal of the National Rose Society was awarded to Victor Hugo, which was a "beauty." Pressure on our space prevents us giving the names of all the varieties, but the best were Robt. Scott, Frau Karl Druschki, Grand Mogul, Prince Arthur, Duchess of Portland, and Marchioness of Londonderry. The second place was given to Mr. Conway Jones, Gloucester, who also staged a grand stand; Mr. H. Machin was placed third. For thirty-six, distinct, Rev. J. H. Pemberton, Essex, had first place with an extra fine stand; Mr. Lindsell was placed second, while Mr. Jones came third. In the other amateurs' open classes, good exhibits were seen, and the fore-named were the chief winners. Mr. R. Park, Yorks, was awarded a first, Mr. W. Boyes, Derby, a second. Mr. R. Foley Hobbs,

Worcester, came first for eighteen, while Mr. Mawley ran close second, and Mr. Whittle, Leicester, third.

For twelve blooms, distinct, Mr. R. L. Garnett, Lancaster, got first place; Mr. G. Moules, Hitchin, getting second, and Mr. A. Gray, jun., Dalry, Scotland, third. For six distinct, first prize was awarded to Mr. H. Adamson, Bedale; while Mr. W. Upton, Leicester, got second, and Miss Nina Dickson, Newby-bridge, received third. For six blooms of any Rose except T. or N., Mr. F. A. George, Worcester, ran first; and Mr. Upton followed; with Mr. Adamson third.

In the class of new Roses, six distinct, Mr. Jones excelled, and Mr. Whittle had a close second, with Mr. W. K. Gair, Falkirk, third. For twelve blooms, distinct, three trusses of each, Rev. F. R. Burnside, Essex, had first; Mr. Jones following second. For nine blooms, distinct, Mr. Hobbs was first, Mr. Whittle second; and for six blooms, Mr. Upton led, and Rev. R. T. Langtree, Grange-over-Sands, second.

In the extra classes for amateurs for six distinct, three of each, Rev. Mr. Burnside scored; Mr. R. Park, Bedale, getting second, and Mr. Jones following third. For six blooms of any one variety, Mr. Moules succeeded; Mr. Hobbs having second, and Mr. Whittle third. For twelve distinct, three of each, Rev. Mr. Pemberton and Mr. H. Machin, Worksop, were placed equal, both having good exhibits. For six distinct, three of each, Mr. Mawley got first.

LOCAL SECTION.

The local section (confined to Scottish members) had heavy entries, but the weather apparently had interfered with their blooms, as not a few who had entered were unable to stage. In Scotland of late the weather has been very disastrous, and there are many rosarians who have not yet up to this time been able to cut a bloom. It is to be hoped, however, that their reward will be forthcoming shortly. For eighteen distinct varieties Mr. J. D. Bennett, Helensburgh, had the first place with very fresh blooms, his best being Marchioness of Londonderry, Alf. Colomb, Baldwin, Mrs. Jno. Laing, Souv. du Pres. Carnot, Antoine Rivoire, and K. A. Victoria. The second place was given to Mr. John Russell, Newton Mearns, who had also a good stand, his best being Bessie Brown, Mildred Grant, K. A. Victoria, Marquis Litta, Gustave Piganeau, and Général Jacqueminot. The third place was given to Mr. P. Farquhar, Helensburgh. For twelve distinct varieties, Mr. Black, Kinglassie, Fifeshire, secured the piece of plate given by Rev. Mr. Pemberton, with good blooms of C. Testout, La France, Catherine Mermet, V. Folkestone, Gustave Piganeau, Marquis Litta, Helen Keller, Miss E. Richardson, Mrs. Jno. Laing, Mrs. W. G. Grant, Souv. de S. A. Prince, and K. A. Victoria.

MEDAL BLOOMS.

Six of the National Society's medals (for best blooms) were awarded, being equally divided between the two classes of exhibitors. The two for Teas were won respectively by Messrs. D. Prior and Sons, Colchester, and the Rev. F. R. Burnside, both with the White Maman Cochet; the two for Hybrid Perpetuals fell to Messrs. B. R. Cant and Sons, Colchester (Ben. Cant) and Mr. E. B. Lindsell (Victor Hugo); and for Hybrid Tea Rose, to the King's Acre Nurseries, for Mildred Grant.

The exhibition was formally opened by the Lord Provost, Sir John Ure Primrose, Bart. The chair was occupied by ex-Provost Mitchell, of Helensburgh, who introduced the Lord Provost, who said he had many varied duties to perform, but he could hardly imagine anyone more delightful than that of opening a Rose show, where there were so many beautiful flowers.

He believed he was justified in saying that in the long history they never had a show that excelled the present one, and very few that equalled it. Even in the sunny south, the Roses this season did not present such perfect beauty as they saw that day, and they in Glasgow congratulated themselves in having gathered, in St. Andrew's Hall, so many perfect specimens. After referring to the pleasant occupation of Rose growing, he said it had its commercial aspect as well. He congratulated the society on its efforts, and he hoped that in their mission of preaching and teaching the gospel of beauty, they would have abundant success. At the close of Sir John's speech, Mr. Mawley briefly addressed the audience.

Speeches at Luncheon.

After judging, the directors, judges, and friends dined together in the Grand Hotel, ex-Provost Mitchell, Helensburgh, presiding. After dinner, the following toasts were proposed: "National Rose Society," by ex-Provost Mitchell, replied to by Mr. Mawley; "West of Scotland Rosarians' Society," proposed by Mr. Mawley, replied to by Mr. Spalding, late secretary of the society; "The Judges," by Mr. J. Hood, one of the directors of West of Scotland Society, replied to by Rev. Mr. Pemberton. In the course of his reply Mr. Pemberton referred to the hard work that lay before the judges that day, and stated in some classes it was the toughest fight he had seen. The Roses on this occasion were of the finest character, and even surpassed those exhibited at Bath and Wolverhampton this year. He spoke of the fine colour of the Perpetuals, and there were some there that day, he stated, he had not seen so fine before, especially Reynolds Hole, which was simply exquisite. He also referred to the Hybrid Tea section, and said he thought too many new varieties

were now being produced. We had too few of the darker Perpetuals. "What is wanted," he continued, "is a dark red Bessie Brown and a few Horace Vernets." In conclusion, he referred to two of the newer Roses—Bessie Burnside and Mrs. David McKee—and said that a bright future lay before them. On Mr. Mawley proposing a vote of thanks to the chairman, the company dispersed.

There was a fair attendance of visitors during the day, but as the evening drew near more people began to come in. It was suggested by someone that a little more money might have been spent in advertising the show. This lack of advertising possibly accounted for the meagre attendance during the daytime. The weather, of course, was not of a genial character, but even that does not affect those who are true lovers of the Rose, especially the Scottish people, who are so much used to daily changes in the weather!

The band from the Clyde training ship "Empress" was present, and rendered popular selections, which were highly appreciated.

Messrs. Dobbie and Co., Rothesay, exhibited beautiful stands of Sweet Peas, Pansies, and Violas, and Pelargoniums, double and single Zonals.

Mr. Matthew Campbell, of Blantyre, also exhibited some fine specimens of his latest Carnations.

Ipswich, July 15th.

This show was held as usual in the Upper Arboretum, and was favoured with very fine weather and a good attendance. The trade growers showed poorly, possibly because of the N.R.S. northern exhibition at Glasgow being on the same day, but amateurs mustered more strongly than usual, Mr. Orpen's fine exhibits adding much to the beauty of the show.

In the open classes D. Prior and Son led pretty easily with thirty-six, showing Bessie Brown and White Maman Cochet well.

F. Cant and Co. second, with smaller flowers. The same order was observed in twelve trebles, but the competition was closer; besides the flowers mentioned, Messrs. Prior had good triplets of Frau Karl Druschki and Horace Vernet. In twelve Teas the order was reversed, F. Cant being first, having both Maman Cochets in good order, and Messrs. Prior second. For six similar H.P.'s or H.T.'s, Messrs. Prior were first with Bessie Brown, and Frank Cant second with Mildred Grant. In six similar Teas, Mr. Orpen was easily first, with a magnificent box of White Maman Cochet, Prior second with Maman Cochet, and F. Cant third with the white variety. In Garden Roses, Hon. W. Lowther was first and L. Holden, Esq., second.

In the amateur classes, Rev. A. Foster-Melliard was first for twenty-four, having good blooms of Frau Karl Druschki, Mildred Grant, Mamie, Mrs. J. Laing, Duchesse de Morny, and Countess of Caledon. Mr. Orpen was second with smaller and poorer, but much better set-up flowers, of which the best were perhaps White Maman Cochet and a small specimen of Liberty. R. Steward, Esq., of Norwich, third. For twelve Mr. Orpen was first, with Mrs. Sharman Crawford and Maman Cochet as his best, Rev. H. A. Berners second, and Mr. Foster-Melliard third, with a good Lady Moyra Beaulere. In six trebles Mr. Orpen was first, having good triplets of the two Mamans and Bessie Brown, Mr. Berners second, and Mr. Steward a good third.

In twelve Teas, Mr. Orpen was first with a neat box, having clean samples of Mad. Cusin and White Maman, Mr. Foster-Melliard second with larger but much less neat flowers, among them a good Golden Gate, a very large La Boule d'Or, with the colour rather gone, and a neat specimen of the new Boadicea. Mr. R. Curtis, of Morningford, was third. In six similar H.P.'s or H.T.'s Mr. Steward was first, Mr. Orpen second, and Mr. Foster-Melliard third, all showing Bessie Brown. In six similar Teas, Mr. Orpen was first, Mr. Berners second, and Mr. Curtis third, the first named showing White Maman Cochet, and the others the coloured variety.

In judging the dinner table decorations, which consisted of two classes, open and local, the committee, possibly mindful of some badgering they may have received on previous occasions,

hit on the novel expedient of allowing the public—all visitors to the show—to judge them themselves by ballot. From the practical point of view of encouraging interest in the matter, and at the same time relieving anyone of responsibility, it seems a happy thought, though perhaps hardly fulfilling the flower show ideal of educating the public taste. In the result the win was easy in the open class, Miss Lister receiving 287 votes, against 174 and 107 for the second and third. But in the local class it was a very near thing, Miss E. M. Corder getting 151 votes, and Miss M. Cubitt 150, the third following with 118. I do not know whether Miss Cubitt "called for a scrutiny," as would doubtless have been the case at a Parliamentary election; but I do know that if the voting had come out equal as it so nearly did, and I had been a member of the committee, I should promptly have resigned my office and gone home.—W. R. RAILLEM.

After the Roses, the most attractive feature of this show is the collections of herbaceous plants. The principal class for thirty-six bunches brought only two competitors, Mr. C. Jacobi, Henley Road Nursery, Ipswich, and Mr. R. C. Notcutt, The

Nursery, Woodbridge, who secured the awards in the order named. Mr. Jacobi showed a grand bunch of *Lilium testaceum*, also *Iris Monnierii*, *Alströméria chilensis*, and *Oenothera Fraseri*, in good condition. The second prize collection contained good bunches of *Thalictrum glaucum*, *Campanula lactiflora*, *C. persicifolia Moorheimii*, and *Callirhoe lineariloba*, a pretty malvaceous plant with purple flowers.

In the amateur class for twelve bunches there was a good competition, but not one of the collections was named, which considerably detracted from their educational value. The first went to the Hon. W. Lowther, Campsea Ashe (gardener, Mr. Andrews), for a fine exhibit, which included some lovely flowers of *Ostrowskya magnifica*, likewise nice bunches of *Centaurea ruthenica*, *Delphinium*

nudicaule, and *Iris Kämpferi*. Sir C. Domville, Bart., The Chantry, Ipswich (gardener, Mr. Creek), was second with a fresh exhibit.

Sweet Peas were much in evidence, several classes being set apart for them. In the majority of cases the staging was too formal. For twelve varieties, the Rev. G. Hooke, Clopton Rectory, was first, and Mr. E. Abbot, Railway Nurseries, Ardleigh, second.

Pot plants were not numerous, and call for no special notice, with the exception of the groups. For a group occupying a space of 100 square feet, Mr. A. Creek, The Chantry, was far ahead of all competitors, with a very effective arrangement of well coloured *Codiceums*, *Acalyphas*, *Celosias*, and *Francoas* upon a groundwork of Ferns. The background of tall plants of *Grevillea robusta*, and *Humea elegans* was the weakest spot in an otherwise excellent group. Mr. R. C. Notcutt was second, and Mr. H. J. Southgate, St. Helen's Nurseries, Ipswich, third.

Considerable interest was evinced in the classes for table decoration, owing to the innovation of public judging by ballot, between the hours of two and four o'clock. In the open class, Miss Lister was first with 287 votes for a pretty arrangement of *Perle d'Or* Roses, *Gypsophila*, and *Smilax*; while Miss M. Snell ran in second with 174 votes, using a single pink Rose and *Asparagus plumosus* with excellent effect. In the other class, closed to lady amateurs of Ipswich, there were nine entries, the prizewinners being Miss Corder, Miss Cubitt, and Mrs. Hubbard, who received 151, 150, and 118 votes respectively. The leading table was very tastefully decorated with pale pink Sweet Peas and Carnations, relieved with Maidenhair Fern. Most of the gardeners' votes, however, went to the second prizewinner, who put up a charming arrangement of *Begonia semperflorens*, and *Gypsophila*.

Fruit was very poorly represented. Only one collection of six dishes was staged, the first prize going to the Hon. W. Lowther, who showed Black Hamburgh and Buckland Sweet-water Grapes in poor condition, Ringleader Melon, Barrington Peaches, Pitmaston Nectarines, and Waterloo Strawberries. For black Grapes Sir C. Domville was first, with Black Ham-



Southampton Show: First prize collection of vegetables. (See p. 75.)

burgh, while for white Grapes the Right Hon. J. Round, M.P. (gardener, Mr. Bishop), secured the award with Muscats. For Peaches Lord Rendlesham (gardener, Mr. Rogers), was first with a grand sample of Royal George, the like award for Nectarines going to a well-coloured dish of Humboldt, shown by Sir C. Domville.

Amongst the non-competitive exhibits one could not fail to notice the very effective display of Roses staged by Mr. R. C. Notcutt. All the best varieties of H.P.'s and H.T.'s were represented, being cut with long stalks and informally arranged in glass bowls amidst a setting of Maidenhair Fern. Large bunches of Crimson Rambler intermixed with Palms were used as a background. Messrs. W. Cutbush and Son, Highgate Nurseries, were well to the front with an exhibit of cut flowers of Malmaison and border Carnations in several choice varieties. From Messrs. Fred Smith and Co., Woodbridge, came an attractive collection of hardy perennials and annuals, together with a nice assortment of Sweet Peas. Mr. E. Abbot, Ardleigh, likewise made a speciality of Sweet Peas. The show was favoured with lovely weather, and it is satisfactory to know was a financial success.—E. C.

Highgate Horticultural, July 16th.

The more one sees of the districts of London, the more one wonders why so many writers continually bewail the existence of "miles and miles of bricks and mortar," and leave one with the impression that parks and open spaces were greatly the exception and not the rule in this huge metropolis. It would be startling if the area of all the "open spaces" in London could be presented for public consideration; and it was such a thought as this that occurred to us at our visit to Southampton Lodge, the residence of Colonel J. Wilkinson, at Fitzroy Park, N., where the summer show was located last week. Here was the beautiful and rural-like park, with Parliament Fields and ponds; while further northward lay Lord Mansfield's estate, and still within view was Hampstead Heath and the Highgate Woods—all this huge area of meadows, wood, heath, and water being part and parcel of the North London district.

Before briefly referring to the show, the grounds in which it was held may be noticed. They are typical of the many other gardens in this neighbourhood. The ground is very much undulated, and level places can hardly be seen. Everywhere there are magnificent trees, the Oak, Beech, and Elm predominating, and groups of shrubs fill up the scheme beneath.

Southampton Lodge can show some beautiful deciduous Cypresses (*Taxodium distichum*), a few Sequoia giganteas, Cedars, Mulberry trees, Negundos, and at least one handsome white Poplar, whose silvery leaves glitter in the sunshine. The cut-leaved black Birch is a tree not often seen, and one is here. There is a fine tea-arbour shaded and roofed with Vines, and so many as 200 bunches have been taken from these. Fruit trees and bushes were generally good, though American blight was somewhat too conspicuous on the Apples, and a few sprayings with Bordeaux mixture or paraffin emulsion would work a change. Triumph Melon in very tiny pits, as well as Cucumbers, and the Grape Vines, each spoke of careful treatment.

The plant houses are stocked with useful decorative plants. On the formal flower garden terrace one noted a sturdy Palm (*Chamærops—Trachycarpus—excelsa*) that has stood out many winters, and with it a *Phyllostachys* and Negundo. The Fern walk leads us through to the open park, lying full to the sun, and it was here that the tents were pitched for the flower show.

The exhibition was distinctly good. Mr. W. E. Boyce, who is also secretary of the Highgate Chrysanthemum Society—a distinct organisation—likewise manages the secretarial duties here, and he knows the benefit of local advertising by means of circulars and bills. Even in the centre of London we were able to choose a car that would land us almost at the gates of Fitzroy Park, and as we have had difficulties many times before to discover the locale of shows, the hint may not be lost to others who read these notes.

The groups were a fine feature, though with the space at command, it would be no tax on the competitor's supply to allow a greater area on which to arrange the plants. They should show off each subject more than can at present be done. As it was, however, the groups were very pleasing, and Mr. H. Harmsworth's gardener (J. Callingham), from North End Place, Hampstead, was first in class 1; and Mr. T. L. Turk, gardener to T. Boney, Esq., Southwood House, Highgate, formed a good second. The latter was first, and Mr. S. Hardy (gardener, E. H. Chitty) second, for the group of flowering plants without foliage subjects; but the order was reversed where the group of foliage plants were asked, Mr. Chitty having a highly creditable arrangement of Caladiums, Coleuses, Nephrolepis, and Adiantums. The single-handed gardeners' group was won by Mr. J. Adams, Hillside, Fitzroy Park; and second, Mr. E. H. Chitty.

The small Gloxinia section deserves full praise, and here the leading honours fell to E. P. Sells, Esq. (gardener, Mr. G. Drage), Bishopswood Road; second to J. S. Seller, Esq. (gardener, Mr. G. W. Earp), The Grange, Highgate; and third to Mrs. Legg (gardener, Mr. Smith), Eastwell House, Douglas Road, Canonbury. Begonias were too tall to be really good, and Mr. Drage again led.

Hardy cut flowers were poorly staged, and the selection might have been much better. This department can easily be developed, and deserves to be.

Mr. Turk's four Caladiums were excellent, and Mr. Drage's six exotic Ferns were also a good feature, as were his Coleuses, six in number.

There were dinner table decorations of a very secondary character, and the tables might have been placed end on. Sweet Peas and tall Fescue Grass were used in the three tables, the awards falling to Messrs. Turk, D. B. Crane, and Chitty, as named. Messrs. Chitty and Callingham were placed in their order for a shower bouquet, but the points must have been pretty level.

Mr. Crane was foremost for the twelve bunches of Sweet Peas, Mr. Earp and Mr. Callingham second and third respectively. In Mr. Earp's set of a dozen greenhouse bunches were the lovely and seldom seen Pentas carnea, and some nice Rose buds. Roses were not well staged, nor had they been cultivated to the exhibition standard. With really good fruits, Mr. Earp easily led against Mr. D. B. Crane for the dozen dishes of hardy sorts.

In class 12, for the best collection of garden produce, the lead was accorded Mr. W. Bignell, 5, Castle Yard, Highgate, with five kinds of fruit in the centre (being in a great round basket), twelve kinds of vegetables, Rhubarb, and Roses, and hardy flowers at the back—a really creditable display from a small town garden. Naturally, it was much praised. The same exhibitor won for a collection of vegetables. Messrs. Cutbush staged a group of plants.

Formby, July 15th.

This show is now one of the most important in the Liverpool district. There was a superior stamp about the show, and the display of Roses and vegetables was very good. Mr. Kennedy won the four guinea, three guinea, and two guinea silver cups for twelve distinct, twelve Teas or Noisettes, and twelve in not less than six varieties; also six Teas or Noisettes. Mr. F. A. Rockliff and Rev. J. B. Richardson were seconds, with blooms of such quality as would have gained high honours elsewhere. The four guinea cup for six distinct was a tight fight, Mr. G. Lunt being victorious with splendid flowers.

For six light Roses, Mr. Luther Watts was placed first with rich flowers of Caroline Testout, Madame Cusin, and La France; and Miss M. A. Rimmer winning for darks. Each received a two guinea cup. Messrs. Luther Watts and T. Carlyle won the remaining two guinea cups, the former with handsome Mrs. Mawley and Mme. Hoste, and the latter M. Cochet and K. A. Victoria. Mr. Kennedy's five La France Roses in vase were superb. Crimson Rambler, from Rev. J. B. Richardson, was the best cluster Rose.

For growers of not less than 200 plants there were many grand flowers. Mr. T. Pugh, the secretary, won the two guinea cup with six darks; very fine were Captain Hayward, Prince Arthur, and Alfred Colomb. Mr. E. Sergeantson was a close second. Another two guinea cup for six Roses (light varieties) saw Mr. D. Lever to the fore. The N.R.S. medal blooms were Maman Cochet from Mr. T. Carlyle and Caroline Testout from Mr. W. Dodd, jun. Mr. J. H. Page took the remaining cup in this section with a pretty six.

None the less interesting was the exquisite display of Sweet Peas, six competing for the silver cup presented by Mr. H. Middlehurst. This was won outright by Mr. W. Dodd, jun., last season, and again he had the new one, with bright-coloured blooms. Mrs. Luther Watts was a very good second, and Mr. E. A. Allen third.

It was pleasing to see such a vast improvement in stove and greenhouse plants, the genial president, Mr. J. Formby, winning for single and double Zonal Pelargoniums, Maidenhair specimen, three Coleus, and three stove and greenhouse plants. Mr. F. A. Rockliff was successful with three stove and greenhouse Ferns and three capital hardy varieties; Mr. J. Aindow with Fancy Pelargoniums, Petunias, and coloured Pelargoniums and specimen Fuchsia.

Mr. E. Storey had table plants and Gloxinias, Mr. Luther Watts had beautiful Begonias, Mr. Sergeantson staged excellent Carnations. There were six table decorations, many of which were too heavy, the judges awarding the prize to Miss Jackson for a charming arrangement. An original design came from Mrs. Mathias, in the form of a plant flanked pool, arched over. A little more brightness would easily have reversed the decision, for it was superbly done. Hardy fruits and vegetables were simply grand, as was the cottagers' section. The committee contains no gardeners' names. Messrs. E. H. Bushell, the energetic treasurer, and Mr. Thos. Pugh, the secretary, with the above, working all without a hitch.—R. P. R.

TRADE EXHIBITS.—Two magnificent boxes of Mildred Grant Rose, one of Bessie Brown, a rich assortment of herbaceous plants, and grand coloured Sweet Peas were sent by Messrs. A. Dickson and Sons, Newtownards; a fine table of Lilies, Carnations, Sweet Peas, &c., from Messrs. T. Davies and Co., Wavertree; a very choice collection of Sweet Peas from Mr. H. Middlehurst; and a table of Roses and miscellaneous flowers from Messrs. Caldwell and Sons, Knutsford.

THE BEE-KEEPER.

Care of Comb Honey.

As so much depends upon the appearance of honey in this form, any hint towards improving it is very valuable. In some cases it enables the bee-keeper to obtain higher prices and a more rapid sale than would otherwise be possible. To procure comb honey in the best condition it should be removed from the hive as soon as capped over. It is then beautifully white, appetising, and inviting. When it is allowed to remain on the hives a longer period the cappings become darkened, and the appearance of the section is consequently injured. After removing from the hive they must have all the propolis scraped off them. This is best done by a glazier's knife, care being taken not to break the comb by roughness, or the leakage caused will soon spoil its appearance.

If it is desired to keep the honey, each section must be wrapped up carefully and neatly in paper, and then stored in a cupboard, preferably near the fireplace or somewhere where the temperature is about 90deg or above. After being in a position of this kind for some time it thickens the honey, and gives the section a fine appearance, instead of the unattractive look which it gets in a cellar or other cold places. At a low temperature water condenses on the surface of the comb, making it appear less palatable, and should it freeze it will crack the combs, and the honey will run all over the surface.

Should any sections be discoloured by travel stains, they may, by exposing them to the direct rays of sunlight, be whitened in some cases, which will improve them considerably. There are, however, different kinds of stains on sections, the most common being propolis, and the above mentioned bleaching process will with perseverance usually suffice. From one to three days exposure is, as a rule, sufficient. The use of new foundation in the body boxes also obviates travel stains to a great extent.

Of course, if the honey flow can be timed properly, and the sections placed above a very powerful colony, rapid comb building, storing, and sealing is accomplished. All these things, by assisting in the early removal of the honey, and reducing the traffic over the surface of the comb, add eventually to the beauty of the section; and, as regards minimising the use of propolis, an excess of it will be avoided if the section rack is properly fitted up, *i.e.*, all the sections fitted closely and evenly together, and then firmly wedged from the ends. This makes it almost impossible for the bees to find crevices to glue up, and saves needless trouble to the apiarist.—E. E., Sandbach.

Honeydew.

It is many years ago since first I heard of this substance. Whilst talking to a friend on profitable rural pursuits, bee-keeping cropped up. About that time there had been a run of bad honey seasons in his locality, and this he accounted for by saying that there had been but few "honeydews" during that time. Before that conversation I had never heard of these wonderful dews, which had, for so long, proved such a blessing (?) to the bee-keeper. I smiled to myself, not believing there was such a thing in existence. Now I am convinced he did not know what the liquid was. Very shortly afterward I read a very able article on the subject in a bee journal.

WHAT IS HONEYDEW?—It is a sparkling substance made by the aphid (green fly), which in so many ways causes trouble in our gardens. When nectar is scarce the bees gather and store it. Very often it is so plentiful that it drops from the trees like a slight shower of rain. It is a cloudy, sooty-looking sticky liquid. When stored it is fairly easy to detect if the sections and frames be held between the observer and a strong light. A few summers ago I had been invited to view a gentleman's large kitchen garden. The head gardener was engaged in taking off the supers from a hive. Being asked to express an opinion on the quality of the honey, the peculiar and unusual colour attracted my attention at once. As I had never seen honeydew until then I hesitated to give an opinion. Having tasted it and noticed the sooty taste and look I was confident that this vile substance had been gathered. It is often found during a dry season when east winds have been prevalent.—HYBLA.

Bee-keepers' Lament.

Many of our friends who neglected autumn feeding and a spring peep into the hives, have now great cause for sorrow. On every hand we hear that stocks have perished for lack of food. A few evenings ago I went among my cottager neighbours to make arrangements for the purchase of a few early swarms. Everyone of them had the same tale to tell, either "we shall require all our swarms, because we have lost so many stocks," or "we don't think we shall have any swarms, our hives are so weak."

One man, who has reached the great age of fourscore years, is still active, and takes a lively interest in bees, told me that he has never known such a disastrous season. How can we best

make good our losses? To think of profit under such conditions is entirely out of the question. Feed well for a little time with syrup made of about 1lb of white sugar to a pint of water, boiling it for a few minutes, and stir to prevent it being burnt. The bees will well repay this outlay. The other day I examined a stock of bees, and they were on the verge of starvation, for there was not more than a teaspoonful of liquid in the whole hive. The bees had given up brood raising. That same night I gave them some syrup and examined the hive in two days' time and found that the queen had laid a surprising number of eggs. If we wish to increase our stocks when the hives are fairly strong, then we must resort to artificial swarming. For the sake of those not acquainted with the art I will explain briefly:

A B C

Suppose A and B are strong stocks. Choose a bright day, when the bees are out foraging. Take some combs, say six, containing brood and eggs, from A. Brush off all the bees. Place the combs closely together in a new hive, cover up warmly, putting the new hive in the place of the strong stock B, and remove B to stand C. Thus one hive provides brood and eggs and another the bees. The bees will set to work to raise a queen. In this manner we may raise up good stocks ready for a fresh start next year.

One word of warning, and I will bring this brief note to a close. Many will advise you to add some hurtful ingredient to the syrup which is believed to cure foul brood and prevent it, but the man has yet to be found who knows of a case where it has had the desired effect.—HYBLA.



Hardy Fruit Garden.

YOUNG FRUIT TREES.—Trees in the open and against walls, planted in autumn or spring, should now be making good progress, and most probably will require attention in watering, mulching, stopping shoots, training and regulating. When the trees are growing in dry positions, and there follows a period of protracted dry weather, which is often the case about this time, the trees may suffer. It is also possible for them to feel the effects of dryness even during a showery time, when the soil is so light and dry that moisture quickly drains away. An experienced cultivator will quickly notice the growth, judging from that whether the progress made is satisfactory or not. A strong and rampant growth is not so desirable as shoots produced of medium strength, as by the latter it will be seen roots are being formed of a fibrous character, hence sufficient moisture has been found up to this point. To preserve it still longer the trees should have a mulch of manure. In applying water give a copious supply so as to reach below the roots, but do not give liquid manure to young trees that are only making wood, unless the growth should be of a weak and unsatisfactory character, when a stimulant might improve it. When the soil has been thoroughly moistened, spread over it as far as the roots extend a layer of manure, which will act as a conservator of moisture, and render further waterings less, if not wholly, unnecessary. Having given adequate attention to the roots, examine growth, and endeavour to equalise it for the benefit of the trees. In bushes and standards weakly growths may be removed and overgrown shoots shortened back. Trained trees on walls must be treated according to the manner of their growth, training out in a free manner all those which produce fruit on current year wood, while specimens of restricted form must have the side shoots duly stopped, leaving several good leaves at the base, which induce the formation of fruit buds. Regulate and space out main shoots or branches, so that the secondary and minor growths may have ample room for proper development. In addition, insects must be kept down by occasional vigorous syringing, applying insecticides to suppress severe attacks.

SUMMER PRUNING ESTABLISHED APPLES AND PEARS.—Large espalier, bush, and other restricted trees have now sufficiently completed their summer growth of shoots as to permit of the annual shortening back of the foreright shoots of wall trees, and the side growths of trees and bushes in the open. Too early shortening may result in the vigorous growth of fresh wood, and the probable starting of the eyes at the base, it being desirable that these remain dormant, or rather plump up, but not burst into growth, which will destroy their chance of becoming fruit buds. The shortening of the summer shoots may be carried out at the fourth to sixth leaf. The weaker growths may

have the latter number of leaves left. Some thinning out may also be done, taking the opportunity to dispense with weakly spray growing towards the interior, or crowded shoots pushing in any direction.

PREPARING GROUND FOR STRAWBERRIES.—The season for planting, especially early prepared plants, will soon be upon us, hence it is very essential that the ground should be in readiness for inserting the plants without undue delay. Some growers wisely decide in the spring previous where the quarter of early Strawberries shall be established, liberally manuring and deeply digging the position at that time, growing thereon a crop such as Potatoes, which can be removed in time to plant Strawberries. This is a good method, as the ground becomes ameliorated and improved by the culture afforded, during the occupancy of the soil by the summer crop. But little labour is attached to preparing the soil for planting. It suffices to fork over the surface and break down lumps, removing weeds and Potato haulm. If such ground is not available, liberal preparation must be given a suitable plot. The soil must be moved deeply, and the best manner of doing so is by bastard trenching—that is, digging the soil two spits deep, but not changing the position of the spits. At the same time incorporate a fair dressing of well-rotted manure. This ought to be done as early as possible now in order to give time for the ground to become consolidated. Very light, sandy soil must be trodden firmly when in a moderately dry state.

TREATMENT OF STRAWBERRY BEDS AFTER FRUITING.—Immediately fruit has all been gathered from the beds the nets used for protecting the fruit must be cleared off. The next step should be to cut out superfluous runners. If more are wanted to root for stock they will all be superfluous, but in the event of a number being required for this purpose, a selection of the best must be made, and the rest cleared away. Those retained may be pegged down on a layer of fresh soil, and kept well watered. Layering in pots or on square pieces of turf may be done if this is more convenient. The strongest runners ought in all cases to be selected for layering, cutting off all growth beyond.—EAST KENT.

Fruit Forcing.

PEACHES AND NECTARINES: EARLY FORCED TREES.—Trees in pots of the very early varieties, such as Amsden June, Alexander, Waterloo, Early Beatrice, and Early Louise Peaches; Cardinal, Précoce de Croncels, Early Rivers, and Rivers' Orange Nectarines, may be placed outdoors as soon as the wood has become firm, assigning them a sheltered, sunny situation, standing the pots on a bed of rough ashes, and covering the pots up to the rims with sifted ashes, keeping duly syringed and supplied with water. They will then not be liable to over-maturity of wood and buds, and blossom buds will form on the laterals, which usually set freely. Planted-out trees started at or before the new year have been cleared of fruit, and the wood on which it was borne removed. This, and the taking out of any superfluous shoots, admit light and air, so that the wood retained becomes brown and hard, and the buds attain perfect formation, but this is contingent upon clean foliage and proper supplies of nourishment. The trees, therefore, must be syringed, and, if necessary, have an approved insecticide promptly applied, supplying water, and in case of weakly trees liquid manure, to the roots, so as to keep the soil beautifully moist. Mulching with light, rather lumpy manure a couple of inches thick, will keep the surface moist, the roots active, prevent the soil cracking, and assist in the retention of the foliage in health. The buds will be sufficiently advanced, and the wood matured, to allow the roof lights to be removed, and this should not be further delayed. This secures a sort of rest, has a most beneficial effect on the trees, while the soil becomes well moistened by the autumn rains.

SUCCESSION HOUSES.—The grand midseason varieties Dymond, Royal George, Grosse Mignonne, Noblesse, Bellegarde, and Goshawk Peaches; Lord Napier, Stanwick Elrue, Humboldt, and Pineapple Nectarines, are now ripening on trees started in February, and leave very little to be desired in size, form, colour, and quality. As the fruit is cleared off the trees cut out the wood that has borne it, thinning the growths where they are so close that the foliage cannot have due exposure to light and air. Cleanse the growths of dust, red spider, and other insects, by means of the syringe or engine with water, using an insecticide if necessary. Keep the borders moist, not soddened, affording liquid manure if the trees are weak, have borne heavily, and the buds are not developing well, but keep it from those inclined to over-luxuriance. Stop all laterals to one joint, but where the buds are in an advanced condition allow a little lateral extension, which prevents the premature ripening of the foliage by continuing the root action, with, at the same time, growth on which to expand it, without danger of starting the principal buds. When the buds are well formed, the fruit having been cleared off the trees, remove the roof lights. If under fixed roofs ventilate to the fullest possible extent.

TREES SWELLING THEIR CROPS.—The trees started in March have stoned, and are taking the last swelling. Draw the

leaves aside and raise the fruit by means of laths, with the apex to the light. Water the inside border, and outside if inclined to dryness, affording liquid manure and a mulch of lumpy manure. Avoid a close surface, for it excludes air; to be open is essential for the assimilation of food for taking up by the roots, as its elaboration by healthy foliage. Ventilate early; in fact, leave a little air on all night, syringing and damping by 7 a.m. and through the early part of the day ventilate freely. When the sun loses power in the afternoon reduce the ventilation, and raise the temperature to 85deg to 90deg, about 4 p.m., with a good syringing and damping of surfaces, but it must be done with judgment, for when water hangs for any length of time on the fruit during the last swelling it is apt to damage the skin, causing it to crack, and imparting a musty flavour. Therefore, have the fruit dry before night, and if the day is dull, omit the morning syringing. Directly the fruit commences to soften or ripen cease syringing, but afford air moisture by damping the paths, and especially the border, whenever it becomes dry, ventilating rather freely, and admit a bit of air throughout the night.

LATE HOUSES.—If it is desired to accelerate the ripening ventilate rather freely in the early part of the day, and up to the early part of the afternoon, then keep the heat obtained by reducing the ventilation, so as to secure 80deg to 85deg, and at about 4 p.m. close, syringe well, and no harm will come if the temperature rise to 90deg or 95deg, ventilating a little at the apex about 6 o'clock so as to let the pent-up moisture escape and the temperature gradually cool down. Regulate and tie down the shoots as they advance, allowing no more than are necessary for next year's fruiting or for furnishing the trees. Let all have space for development, keeping laterals stopped to one leaf, and retain growths to attract the sap to the fruit. Any gross shoots pushing laterals from the leaf buds may be cut back to where the buds remain intact, or, if likely to disarrange the equilibrium of the trees, cut them out altogether. They only tend to promote gumming, imperfect setting, and certain casting of the fruit in stoning. Draw the leaves aside from the fruits, which raise from the under side of the trellis, and expose to the sun. If the fruit is to be retarded ventilate freely day and night, but not, as a rule, have recourse to shading, though a slight shade obtained by drawing herring nets over the roof lights is beneficial than otherwise where the panes of glass are large. Observe the conditions laid down in the preceding paragraph after the fruit commences ripening, also as to assisting the swelling.

WALL CASES.—Secure the growths to the trellis as they advance, being careful to allow space in the trees for the swelling of the shoots, neglect of this being often a precursor of gumming. Keep the growths thin to allow of the foliage having full exposure to light and air and for development. Syringe about 7 a.m., the house having a little ventilation instantly, increasing temperature to 75deg, or if it is desired to accelerate the ripening maintain a temperature of 80deg to 85deg during the day, but always with ventilation, and close sufficiently early to maintain that temperature, but not to raise it above 90deg. Syringe again about 5 p.m. Red spider will not make much headway, provided the syringing is thorough, and the trees are well supplied with water at the roots. Afford liquid manure to weakly trees, especially those heavily cropped. Thin finally directly the fruit is stoned. Neglect of early thinning results in thin-fleshed, flavourless fruits, and they sometimes ripen prematurely.—ST. ALBANS.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1903. July.										
Sunday ...12	N.W.	deg. 62.7	deg. 61.0	deg. 67.2	deg. 60.0	Ins. —	deg. 66.9	deg. 62.6	deg. 57.9	deg. 56.7
Monday ...13	N.W.	58.6	53.0	64.9	46.3	—	64.7	62.4	58.0	35.0
Tuesday ...14	N.W.	62.0	55.2	69.2	45.3	—	62.0	61.8	58.1	34.5
Wed'sday 15	W.N.W.	64.7	58.3	75.7	54.0	—	62.8	61.3	58.1	47.6
Thursday 16	S.W.	64.4	60.0	66.6	54.6	0.09	63.7	61.5	58.1	46.3
Friday ...17	S.W.	65.5	60.4	71.2	56.2	0.75	63.1	61.3	58.1	45.8
Saturday 18	N.E.	61.6	60.0	71.0	57.5	0.15	63.5	61.5	58.2	50.9
MEANS ...		62.8	58.3	69.4	53.4	Total. 0.99	63.8	61.8	58.1	45.3

Rather dull weather, with some thunder showers towards the end of the week.



TO CORRESPONDENTS

* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

CUTTING DOWN JACARANDA MIMOSÆFOLIA (W. M.G.).—We should take cuttings of the plant now—the tops of the shoots—and try and strike them. They should be a little firm, and inserted in sand over sandy peat made firm, in pots over which bellglasses can be placed, or in a close case in a warm house or pit. We should not cut the plant closely down now, but only shorten the growths, keep the soil rather dry through the winter, and prune lower in early spring. Healthy plants are very beautiful in a small state—charming for table decoration and vases.

BOOKS (A. W. H.).—Dr. Hogg's "Fruit Manual" is out of print, and can only be obtained second-hand. "The Garden Manual" is published from the office of this journal. A new edition of Thompson's "Gardeners' Assistant" has been issued in eight volumes by Messrs. Blackie and Sons, and the price is 6s. per volume. You should apply to the firm, who are well-known both in London and Glasgow. Messrs. J. Veitch and Sons, Limited, the Royal Exotic Nurseries, King's Road, Chelsea, London, publish Veitch's "Manual of Coniferæ," and to them you should apply.

EUCALYPTUS (M. S.).—The Eucalyptus would be best cut down, but it is late for the operation. It would have been best to have cut it down in spring, and have kept the roots rather dry until it had pushed afresh, when water could have been given more freely. It will be best to defer the operation now until next year. It does not require a large quantity of water, only giving it when the soil becomes dry, but before the leaves flag, and then a thorough supply, repeating when occasion requires. It would be preferable to raise young plants from seeds sown next March in a hotbed, which if well grown make good plants the same season.

PROPORTIONS OF POTASSIUM PERMANGANATE AND WATER TO USE FOR SPRAYING CARNATIONS (J. S.).—If you use the crystals, 1oz to 3gals of water, this gives a deep rose coloured solution of the potassium permanganate. If you employ a saturated solution of the potassium permanganate, or Condry's red fluid, a tablespoonful to a quart of water. Either or both may be used for sponging, spraying, or syringing. The only drawback to its use is that of staining woodwork, &c., otherwise a good fungicide, and first employed successfully against the Hollyhock disease; the green fluid (manganate), a tablespoonful to a quart of water, being used by means of a sponge for arresting that malady.

STRAWBERRIES PRODUCING SMALL FRUIT (H. E. M.).—The plants of Royal Sovereign and Sir Joseph Paxton around which you sprinkled kainit in April, and that have produced small fruit, not larger than a Barcelona nut, would certainly be prejudiced by the kainit, as it was applied too late, and needs supplementing with nitrogenous matter, such as nitrate of soda. Apart from this, plants four years old cannot be expected to produce large fruit, therefore the best plan would be to procure the earliest and sturdiest runners from the fruitful plants, even if producing small fruit, and make an entirely new plantation so far as they are concerned, and probably also the three-year-old plants. The one and two-year-old plants we should certainly retain, as they will recover from the effects of the kainit, and no doubt afford good produce next year.

BRUGMANSIAS LOSING THEIR LOWER LEAVES (Cambridge).—This is to some extent natural; but these plants are very much subject to red spider, and it is possible that your plants are suffering from that cause. They should be well syringed twice daily should such be the case. It is more likely that the plants at some time have been too dry than that they have been too moist. Standing in a rather shady position would be beneficial rather than otherwise. Give them a top-dressing of loam and manure in equal parts, and when roots appear on the surface give occasional waterings with weak liquid manure. Syringe daily and they may flower tolerably well during the autumn. Postpone shaking them out till the end of the year, when they should be repotted in equal parts of turfy loam and peat and well-decayed manure; but red spider is the chief difficulty with these plants, and must be guarded against.

BRICKS (G. A.).—The price of bricks for building purposes averages 25s. to 27s. per thousand.

BOOKS ("Learner").—"Landscape Gardening," by Waugh, price 2s. 8d., may assist you. Morgan and Co., 8, St. Mary-at-Hill, London, will obtain it for you.

GRAPES SPOTTED (Grapes Onwards).—The berries, evidently those of Lady Downe's Vine, are affected by what is known as scalding, which generally occurs when the berries are about half grown and after stoning, before taking the final swelling for ripening. Sometimes it is but a few berries here and there which are affected, but frequently the entire side or whole of the bunch is damaged. This is caused through late or imperfect ventilation on some bright, sunny morning whilst the internal atmosphere, and even the berries, are saturated with moisture. The preventive is a gentle warmth in the hot-water pipes and a little ventilation constantly, increased from the early part of the day and free under favourable external conditions for about a fortnight or three weeks in advance of colouring and continued until this is well pronounced; then danger from scalding is usually past. The berries are also, or some of them, affected with "spot," which first appears as a whitish mark on the side, usually upper, of the berry, as if it had been bruised in some way. The pulp dries up beneath the skin, and a sort of contraction occurs, the berry soon assuming a one-sided irregular form. This is due to a parasitic fungus, *Gleospodium ampelophagum* (syn. *laticolor*), for which the best preventive is dressing the rods or Vines after pruning with a 10 per cent. solution of sulphate of iron always before the leaves expand, burning all affected berries so far as possible. Some of the berries are shanked, this being no doubt due to a bad condition of the soil composing the border, for which the best course to pursue is careful lifting of the Vines and replanting in good, sound, open material over good drainage, thus having superfluous water carried off by drains having proper fall and outlet.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (J. F.).—1, *Cistus lusitanicus*; 2, *Abies Webbiana* pindrow. (Creeper).—We had overlooked the plant; it is *Vitis inconstans*—synonym *Ampelopsis tricuspidata*. (N.B.).—1, *Lychnis coronaria alba*; 2, *Sedum album*; 3, *Santolina incana*; 4, *Centaurea ruthenica*; 5, *Anemone narcissiflora*, flowering late.



The Omniscient and Courteous Editor.

In the course of a week we manage to devour a good many papers, daily and weekly, of all shades of opinion, and touching on many subjects. One column is of immense interest to us, and that is "Answers to Correspondents." It is perfectly amazing to us the amount of information given and received in that column. We will keep, for the present, to the agricultural organs as they most vitally concern us.

In the first instance we should much like to know something of the age and status of the anxious inquirers after knowledge. Sometimes, nay, often, we are tempted to wonder whether they are all bonâ fide inquiries, and yet we think they must be, as the ingenuity of one man could never devise such a series of brain-racking problems. They are a confiding set these good folks; they apparently think the editor can solve any doubt and difficulty, and they show him no mercy.

It is said of Anthony Trollope that he considered that novelists should subscribe to keep a lawyer, whose sole business it should be to see that no writer belonging to the co-operation should in his books advocate or propound bad law; in fact, we might go one better and suggest a doctor on the same lines, who would see that hero or heroine died of no impossible disorder. But the editor of an agricultural newspaper must either be himself an Admirable Crichton, or he must employ a sound lawyer, a first-rate vet., an analytical chemist, and a general farm adviser for the benefit of his readers, who expect to get safe opinions free, at least for the outlay of a penny for the paper. (We hope their subscriptions are paid up.)

The people who write are invariably in difficulties with their landlords, and as their questions read, they appear always as the aggrieved party. There is an old proverb about one tale being good till the other is heard. It seems an astounding thing to us that all these landlords should figure as harpies. Surely when a man takes a small holding he should know on what terms it is taken. Surely there is an agreement of some sort drawn up on paper that he reads and ought to understand. As to tenant right, values, and other matters of that kind, the custom of the country is, perhaps, the safest guide, or there must be local valuers and auctioneers who could impart the desired information. A man is always a bit biassed in his own favour, and it requires a very impartial, level-minded man to state his own case, and at the same time to be fair to his opponent. There are constant differences with neighbours about fences, watercourses, trespassing animals, disputed sales, overhanging trees, and a host of other things, that a veritable Daniel would feel uneasy to undertake. The law of servant and master has frequently to be explained, and we fancy the servant is often the master's master.

A new set of questions is cropping up of late, questions respecting employer's liability in case of accident. We will give a bit of advice here. Insure all your servants, big and little, and thus make yourself and them secure for the future. But it is, perhaps, in regard to the ailments of stock that the most numerous questions arise. From pigeons, through fowls, by way of the pigsty, the cow-house, the Shire and Hackney stables, the queries absolutely pour in.

We have seen, and we could not possibly think it a case of undesigned coincidence. A query most decidedly from the same man appears in three different papers in the same week. Now, does he suppose that in the multitude of counsellors there is wisdom? or does he prefer this cheap way of getting advice to paying a qualified vet. from making an examination on the spot? In many cases the questions asked relate to cases that should be dealt with at once. We all know that to facilitate the publishing of a weekly paper the matter must be in type (save that space reserved for late news) some day or two before publication. All this valuable time is being lost.

In the case of animals the progress of disease is often or more generally rapid, and in nine cases out of ten the advice must come too late. Who can these people be who thus put off and dally with mortal illness? Either those who are very ignorant or very miserly. A case came under our notice only last week, when a query was addressed to the editor on a dirty bit of paper, written in faint pencil, respecting some stock that was seriously amiss, and asking for his approval for the administration (in a barbarous manner) of some old wife's nostrum. The question that arose in our mind was, "Would the man proceed with his own remedy, and cause certain agony, if not death? or would the wretched creatures meet their death through the disease taking its normal course? We might add that this particular paper, or rather the editor, is ready to answer urgent inquiries by return of post if a very trifling fee be enclosed. We rather wonder that this system is not more fully carried out, but we think at any rate the fee should bear some proportion to the labour entailed, and when queries come written in pencil that fee should be doubled.

There is another thing that strikes us. There are certain, what we might term, standard ailments, such as scour in calves, abortion in cows, milk fever, and several others equally common. We dare undertake that not a week passes but these cases are cited and remedies asked. This implies gross carelessness and inattention. In the case of a new and infectious disease we could well understand a desire for information, but for ordinary everyday ailments we should be much inclined to refer "Anxious Inquirer" to vol. 00, No. 00, page 00, and see that he did not get a copy without adequate stamps. These are people who never stop to consider how little trouble, not how much they can give to the long suffering editor.

Then again, so many apparently think that the most vague description of ailment in most untechnical terms, is all that is needed to describe an obscure disease. The age and sex of the patient is often left unmentioned, the manner of feeding, housing, and general surrounding is left to the imagination, and they will often ask for a prescription for an animal after two, if not more vets., have declared the case "incurable."

The simple faith that prompts the unsuccessful farmer to ask the editor for a scheme of management by which he may obtain a comfortable competence would be amusing but for the tragic side. Here is another case:—A widow lady of sixty, suddenly deprived of the greater part of a good income, has an idea that she may recoup herself by poultry breeding, and thus be enabled to live in her accustomed style. The kindest thing is to answer decidedly in the negative, but she expects to have the why and the wherefore carefully considered.

As to the questions on dairy management they seem to us utterly superfluous, as such excellent manuals can be purchased for a few pence that reveal every secret and mystery connected with this art. People want royal roads to everything and everywhere, and there is but one royal road—diligent and intelligent application. With respect also to dairy difficulties, if they are very acute why do not the searchers after truth attend a course of dairy classes? Schools and teachers are pretty well scattered broadcast over the United Kingdom, and a good thing should always be worth a little trouble in attainment.

There are earnest people who regard the death of fowls as a great calamity, and are more inclined to search for remote causes than to put down the mortality to the ordinary course of Nature. As for a post-mortem, we can conduct that ourselves. It does not take great discrimination to discover a diseased liver, or super-abundant fat, or a distended crop. Liver disease can be set down as preventible. As in the human race, too rich food is accountable for that, but the owners, not the fowls, are to blame. They, poor things, eat what is set before them or they would starve. Let them follow their own inclinations and have a free run, and they will take care to get plenty of green food to counteract the too heavy diet. There again, as in dairy work, practical manuals are to be found, both good and cheap, and easy of comprehension. Sixpence will go a long way in providing adequate knowledge, and a book on the shelf is better than an editor in London.

We do not want these notes to discourage anyone in the reading of the many good papers that are published; indeed, we would wish them to be studied more closely and read more attentively. There is always something to be found of value, of interest, and of amusement. Some of the best writers of the day contributing. All we ask is that they may have more appreciative readers.

Work on the Home Farm.

The rain which we desired in the interests of all the root crops has been forthcoming, and already a great difference is manifest. Potatoes are covering in and will be difficult to spray, but with the moist weather conditions we have at present it is most essential that the spraying should be done. Turnips under the influence of humid warmth are romping away, and with their annual weeds require every possible attention. A day or two ago we heard two farmers discussing the value of hoeing an acre of common Turnips. One farmer was giving 5s. per acre with a strict stipulation for the work being thoroughly done. The other was getting his Turnips hoed for 4s. 3d., and he said that the work was being done as well as he desired. As he is very thoroughgoing it has probably been done well, and he has saved 9d. per acre in comparison with his friend from the next parish. Labourers are always ready to take a special price for doing fancy work, but the work does seldom much excel the ordinary, and we fancy that the farmer who lets his work on ordinary terms and looks closely after the men is the most practical.

The Clover and hay stacks having had time to settle must soon be thatched, and the thrashing of Wheat and batting of the straw for thatching purposes after harvest must be proceeded with. Machines have been heard humming in several directions lately, and there are grave reports as to damage done by mice. One farmer declares he will never again keep Wheat long into the new year, but probably he has made the same vow before. It certainly is a losing game unless the mice are poisoned, which may easily be done. There is generally an expert at the business in every neighbourhood.

Hedgerows are growing well under the influence of the rain, and will soon be ready for the annual trimming, which we do before harvest if possible. There may be no opportunity this year.

There is a little more inquiry in the wool trade, and several clips are being bought up. It is rather difficult to ascertain exact values, but 15s. per 28lb. half hog and half ewe will not be far from the mark.

We are about to lay in the annual supply of coal. House coal is the same price as last year. Steam coal is 6d. cheaper. Has the coal tax any effect on home prices, we wonder?

ESTABLISHED 1832.

No connection with any other firm of a similar name

Successors to the late BARON VAN PALLANDT.

ANT. ROOZEN & SON'S CELEBRATED BULBS

— FOR —

Early Forcing.

ROMAN HYACINTHS,
ROMAN NARCISSUS,
PAPER-WHITE NARCISSUS
&c., &c.

The above are now ready for delivery, and for full descriptive details of these and other **SPLENDID BULBS** for forcing, see our **CATALOGUE for 1903**, which will be sent free on application to our Offices at **OVERVEEN, HAARLEM, HOLLAND**, or to our General Agents—

Messrs. MERTENS & CO.,
3, CROSS LANE, LONDON, E.C.

FRUIT FARMING FOR PROFIT.

Price 2/9, Post Free.

A Practical Treatise embracing Chapters on all the most Profitable Fruits, with Detailed Instructions for successful Culture on the Kent System.

By **G. BUNYARD.**

JOURNAL OF HORTICULTURE OFFICE, 12, MITRE COURT
CHAMBERS, FLEET STREET, E.C.



EVERLASTING DOUBLE GRIP STAKES,

For Instantly Staking all Plants.

From 5/- per Gross, Carriage Paid.

Send P.C. for a **FREE SAMPLE**, and yourself decide on its merits. It will cost you nothing, and prove to you that

WEST'S PATENT GARDEN SUNDRIES

Plants Protect, Money Save, and Labour Ease.

CATALOGUE, containing 50 large pages, with 100 Illustrations, with Hints on Horticulture, Post Free. No Trade Terms possible off these low prices. Buy from the Manufacturer of all Horticultural Sundries.

C. E. WEST, ROUNDHAY,

OR DIRECT FROM THE
WORKS,

HIGHAM HILL,

NO AGENTS.

(SUFFICIENT ADDRESSES).

LONDON N.E.

No. 1205.—Vol. XLVII., THIRD SERIES.

CLIBRANS ROMAN HYACINTHS

Pure White; deliciously fragrant.

We handle hundreds of thousands of these bulbs annually; that they give satisfaction is evident by the following:—

"HARROGATE, June 3rd, 1903.

"Bulbs supplied by you, especially the Roman Hyacinths, turned out excellent, and were much admired by visitors to the hotel."

"CO. LIMERICK, May, 1903.

"Having grown for several seasons a good quantity of early white Roman Hyacinths supplied by you, I feel it my duty to say I always found them of first-rate quality. I have often counted as many as five and six spikes on a single bulb."

"LEEDS, June 4th, 1903.

"The Roman Hyacinths supplied the last two years have been very fine indeed. They were admired by everyone who saw them."

"WARKWORTH, May 25th, 1903.

"The Roman Hyacinths supplied by you last year were entirely satisfactory, as I have invariably found them to be."

Prices on Application.

MANCHESTER & ALTRINCHAM

ORCHIDS.

CLEAN HEALTHY PLANTS AT LOW PRICES.

Always worth a visit of inspection. Kindly send for Catalogue.

NEW LIST NOW READY.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

LONDON FERN NURSERIES,

LOUGHBORO' JUNCTION, LONDON, S.W.—Stove and Greenhouse Ferns, large and small, in var., Aralias, Grevilleas, Cyperus, Ficus, Ericas, Palms, Dracenas, Aspidistras, Roses, Azaleas, Carnations, Crotons, Camellias, Chrysanthemums, Cyclamen, Bouvardias, Asparagus, Araucarias, Solanums, Aspidistras, Cinerarias, Genistas, Marguerites, Geraniums, Primulas, Orange Trees, &c. Trade, send for Wholesale List. Special Retail Catalogue, free.—**J. E. SMITH.**



Journal of Horticulture.

THURSDAY, JULY 30, 1903.

Soil Nitrogen.



THE element nitrogen so absolutely essential for plant growth occurs in the soil under several different conditions, and is derived from many sources. The air of the soil is impregnated with free nitrogen, and in this state it is of especial importance to the life of certain micro-organisms, which seize upon it as food for themselves, and in the course of their work transform it into an available form for the nourishment of higher plants.

In the first instance, nitrogen exists in the soil as ammonia gas, but this rapidly passes into the nitrous forms through the agency of the microbes. In fact, it has been found in the Rothamsted experiments, where large quantities of sulphate ammonia have been applied as manure, that in three days nearly every trace of ammonia has disappeared, all of it having been converted into nitric nitrogen, in which form most of the higher plants derive their nitrogenous food.

By far the larger part of the nitrogen of soils is, however, stored up in the material known as humus. This humus matter through the processes of decomposition and of nitrification is gradually made available to plants by the action of bacteria; this is Nature's way of providing food for new vegetable life from the debris of preceding life. Thus the decaying roots of growing crops and of vegetable debris incorporated into the soil as manure contribute in no small degree to the stores of organic humus matters in a soil, and as this becomes soluble it greatly assists in soil fertility.

SOURCES OF SOIL NITROGEN.

In the greater number of ordinary soils the proportion of both carbon (humus matter) and of nitrogen become less and less as we penetrate below the surface soil, which shows

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "**THE EDITOR**," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

us that these substances must have had their origin in vegetation which once grew upon the land. Some soils which are called alluvial, possess a subsoil fertility of such a rich character, that they are believed to be deposits derived from the remains of vegetation washed from other soils that existed at a higher level.

This teaches us that fertility of soil, by which we mean its power to feed growing plants, is due to organic residues of previous generations of plants, which have become mixed with certain mineral substances derived from the rocky portion of the earth's surface. The most important of these mineral ingredients is potash, phosphates, and lime. Magnesia is also derived from the decomposition of rocks, and sometimes in such large quantities that the soil where it abounds is very injurious to plant life.

We thus learn that the soil is the medium in which the conversion of any form of nitrogen compound, whether of animal or vegetable origin, into ammonia and nitric nitrogen is effected. This nitric nitrogen is partly absorbed by growing plants, partly fixed by the soil, and partly also, if opportunity offers, carried away by running drainage water. The action of the soil, however, does not stop here. Multitudes of living and active organisms constantly present in it, transform with great rapidity the ammonia from decaying matter into nitrates, in which form cultivated plants—fruits, flowers, and vegetables—greedily absorb and convert it to their uses.

It is well known that the nitrifying organisms cannot carry on their work unless they are furnished with some alkaline ingredient to neutralise the nitric acid as it is formed. This is clearly shown in the Rothamsted experiments. One field is devoted to a four-course rotation of crops. One-third of the acre has received no manure whatever for fifty-four years; while another portion receives once in each four years a full mineral manurial supply of potash, phosphates and magnesia, but no nitrogen.

The third crop of the rotation is Red Clover, which some authorities say requires no manure because it can obtain all its wants from the soil and atmosphere. But what are the actual facts? On this Rothamsted soil, even in rotation of crops, Clover, which is a nitrogen-collecting plant, cannot succeed in a mineral-exhausted soil, and consequently produces only about three-quarters of a ton of hay per acre, and frequently fails altogether, while the adjoining portion of land to which is applied the full mineral manure, but no nitrogenous food, yields about three tons of Clover hay per acre. That is to say, mineral alkaline food being provided for the sustenance of the micro-organisms, they in their turn collect the atmospheric nitrogen, besides oxidising and setting free the inert locked up organic nitrogenous compounds that are present in the soil, and offer it in a soluble and useable form to the higher plants.

Leaf moulds, which are very extensively used in horticulture, are from their very nature essentially rich in humus, and consequently of organic nitrogen; but the nitrification of this organic nitrogen is sometimes rendered difficult by the excess of humic acid which exists in abundance in most peaty and leafy moulds. The constituent may be either lime, magnesia, or potash.

In a great many fertile garden soils the conveyance of calcareous (chalky) matters by the frequent waterings with what are called "hard waters," suffice to keep up a sufficiency of lime; but in leaf and peat moulds, which contain such an excess of organic matter, the mineral bases rendered soluble by nitrification get rapidly used up, and these moulds in consequence become overcharged with acidity, to the injury of the plants, necessitating the supply of some potash salt. Carbonate of potash, a constituent of wood ashes, is found to be excellent for this purpose, or kainit salt, a cheap form of potash; either of which tends to accelerate the nitrification in an extraordinary manner. In some experiments carried out by Mr. G. Trauffaut, of Paris, carbonate of potash applied as manure to leaf mould was found to increase the nitric nitrogen by nine per cent. in one case, and by five per cent. in another; while an addition of lime raised the nitrogen scarcely a quarter-of-one per cent.—J. J. WILLIS, Harpenden.

Old Time Gardening.

A Country Garden.

Bacon's presentation of a garden was, by his own acknowledgment, suited to the establishment of a prince. But we are happy in also having the garden of an ordinary country gentleman described by one of themselves, whose knowledge of the subject, as exhibited in his works, pictures at least a section of that class in a not unpleasing light. Of the identity of the writer we are cognisant only of his name—William Lawson—and that he lived in the neighbourhood of Stockton-on-Tees. He would appear to have been still living in 1623, but the greater part of his life must have been spent in the reign of Elizabeth.

In "The New Orchard and Garden" (1618) and "The Country Housewife's Garden" (1617) is included an epitome of gardening as practised in Yorkshire at the period referred to. Other works on gardening had been produced previous to those of Lawson's, but they were all notoriously what we should now call piracies, or were acknowledged translations, and therefore nothing was truly English about them save the language. On the other hand, nothing in Lawson's works occur that is not original, and, best of all, thoroughly English. As a writer, he possessed the high quality of the Elizabethan age, though the style is somewhat antiquated for the period. The books were extremely popular, and numerous editions were published during the seventeenth century, the best edition being that of 1623, the mistakes of the first having been rectified in this.

As usual, the garden and orchard were attached to the house, one of the greatest pleasures of an orchard in Lawson's opinion being the view from the windows, and the sweet smells that were wafted through the casements to the inmates of the bedrooms. A quaint engraving imports the author's idea of what an orchard and garden should be. As usual it was extremely formal, with straight walks, many steps showing it lay on a sloping ground, conduits, garden house, and a river, which Lawson considered almost essential to a good garden.

Flowers were cultivated in knots, as well as along the sides of walks, and in borders where they intermingled with Gooseberries and other dwarf fruits. Banks and seats were planted with Camomile and other sweet smelling flowers, where, like Jessica and her husband, our author would with his friends, sit of an evening, inhaling the fragrant air, melodious with the song of the nightingale, the blackbird, and the thrush; nor did he despise the "gentle Robin red-breast and the silly Wren, with her distinct whistle like a sweet Recorder." A maze, too, was an essential feature, and besides this, he recommends that "your Gardiner frame, your lesser wood to the shape of men armed in the field ready to give battell; or swift running greyhounds; or of well sented and true running Hounds to chase the Deere or hunt the Hare." You see there was not a little poetry in the old man, nor was he destitute of dry humour, for he concludes: "This kinde of hunting shall not waste your corne, nor much your coyne."

Though Lawson does not describe how these warriors, "guiltless of their country's blood," and these curiously sensitive vegetable animals, were to be framed, his contemporary Markham (1616) does, and by means of engavings shows that the topiarist first of all erected a framework of wood, to which, by the aid of proper implements, he deftly trimmed vegetation into shape. In passing, it may be said that this method continued in use all through the seventeenth century; that, like knots and mazes, growth was clipped two and three times a year, and consequently it was always neat, nor could possibly merit the scathing remarks made upon it by Addison, the chief point of whose criticism turned on the untrimmed appearance of the objects pilloried. Other features include a mount, "a true Dyall or Clocke and some Anticke workes, and especially silver sounding musique mixt instruments and voices." "How!" he exclaims, "will you be rapt with delight!" For exercise it is recommended to have with the orchard a bowling alley, "or rather a paire of Butts." But above all plenty of flowers, Roses, Woodbine, Cowslips, Primroses, Violets, and "thousands more" were to be cultivated.

Two plots furthest from the house were devoted to vegetables, the names and methods of cultivating these being explained in "The Country Housewife's Garden," which is generally found bound up with the "New Orchard." The varieties and kinds are those usually found in earlier lists, and we discover one or two indications of the locality where the writer lived, as, for instance, when speaking of Cole, he says, "Our country housewives give their pottage their name and call them Caell." Rue, though "too strong for mine Housewife's pot," is suitable to "brue Ale therewith against the plague." "Peny-royall or Pudding Grasse," we are assured, is "good for the pot, or hackt meete, or Haggas Pudding." Onions were sown "all the summer long for Sallets, as also young Parsley, Sage, Chibals, Lettice, Sweet Sicilly, Fennell, &c."

It is recommended to "tread the tops of Parneps" in order to make the roots bigger, and the seeds should be selected from the middle of the Cyme, because these are the best, and were called

"Kings." The whole of the chapter from which the above is extracted contains much curious and not unhelpful remarks, and so also in that on "General Rules on Gardening," as, for instance, "Set moist, and sowe dry." "Seeding spoiles the moste rootes." "Thin setting and sowing is profitable," &c.

But it is time to turn to fruit trees, which beyond everything attracted most the mind of Lawson. The sorts he best liked were Apples, Pears, Cherries, Wardens, Filberds, red and white Plums, Damsons, and Bullace. "We meddle not with Apricockes nor Peaches, nor scarcely with Quinches, which will not like in our cold parts"; and, in another part of his book, he pooh-poohs the idea of growing Peaches trained to walls as being altogether antagonistic to Nature, and therefore certain to fail.

Amongst smaller fruits mentioned are Barberries, Feaberries (or Gooseberries or Grosers), Raspberries, Strawberries, which were planted about the roots of tall growing fruit trees and Currants. Some of the cultural propositions enunciated are no doubt provocative of a smile when read in the clearer light of to-day; but in the matter of pruning and training we are not one whit in advance of Lawson. He accorded the branches of his trees plenty of space, and instead of permitting the stems to grow beyond reach, he pruned and trained trees while still young, and thus kept them within bounds, and, so far as we can judge, from a specimen engraved from a drawing of the author, they were, indeed, a roughly grown form of bush, well open in the centre. Then he condemned the practice of uncovering the main roots of fruit trees during the winter months, and he shows that, while it hurts the roots, it did nothing whatever towards effecting the purpose on account of which it was pursued, namely, to retard the expansion of blossom, and so escape spring frost.

In this he was very far in advance of his age, because the practice of ablaquation, as it was called, continued in vogue till well into the eighteenth century. All the same, remarks of Lawson punctuate not only the position he himself had attained as an intelligent pomologist, but also serve to indicate no slight amount of interest in fruit culture generally at the time he lived.

But as the space planted in gardens and orchards was always limited—Bacon's princely gardens, it will be remembered, extended to only thirty acres—Lawson planted only the more valuable kinds, such as Cherries, Damsons, and Filberds, being relegated to the fencing, which formed in those days an indispensable complement to gardens. It may be noted that on account of the animals, such as deer, goats, sheep, hares, conies, cattle, and horses, all of which appear to have roamed at will about the country, a fence with its addition was a formidable affair. Lawson describes one with an outer and an inner ditch 4ft. in depth, between which was a broad space for a fair walk. The sides of this mound were planted with Thorn and Honeysuckle, and various trees, including the fruits already noted. Another form of fence in common use was a "dry wall of earth." Our author's sympathies tended in this direction because Wallflowers grew naturally thereon, and afforded with "Palmes" an early feed for his bees. Earthen walls were, indeed, almost an English institution as a garden fence. Turner, for instance, observes that *Hordeum murinum* was called Wall Barley because it commonly grew on fences of this kind, and 200 years later Mr. Lawrence, when he commenced gardening, had to remove an earthen wall and replace it with one of brick.

Stone, wood, and brick were also in use for fencing in Lawson's day, but the impression one receives is that they were not common. I have incidentally mentioned bees which formed at this period an unfailing item in the gardener's daily work, and Lawson mentions a method of protecting hives in recesses in stone walls as a novelty in his experience, which derives not a little interest from the fact that in the old gardens attached to Edzell, in Forfarshire, exactly the same recesses remain till the present day in one of the garden walls.

The general reader may have concluded that Lawson was himself merely a gardener, but while it is clear that he was perfectly cognisant of methods and means, and qualified to not only direct but to undertake much of the operative work in a garden, it is at the same time inadmissible to accept that theory. Lawson employed a gardener, and, moreover, explains that his book was written not so much for people who kept a gardener as for those who had to trust to labourers, and who not improbably would welcome his book as a help in directing their work. Besides, I am unaware of any other source where it is possible to gain so definite a pronouncement on the gardener of that period as that given by Lawson.

It is needless to copy the lengthened list of good qualities the head gardener of 300 years ago was expected to possess, but it may be noted that "hee must not be a scholist to make shew." He concludes "you must needs allow him good helpe to end his labours which are endless, for no one man is sufficient for these things," and elsewhere it is remarked, "Your under gardners must labour to keepe all cleanly and handsome." Here we have unimpeachable evidence of country gardens in England being managed by men not devoid of education, and assisted by a staff of under gardeners who admittedly performed work of the same nature they do to-day.

The exigencies of space have caused the omission of not a few interesting and instructive passages—e.g., the subject of soils,

cultivation, stocks, grafting, and gathering of fruit, and the management of forest trees, on which Lawson held very pronounced opinions, and apparently in advance of those entertained by his countrymen. But possibly sufficient has been noted to indicate the broad lines on which gardening progressed in the north. Of course it is at once palpable to the student of Lawson that, along with the practical advice he places at the service of his reader, he was at the same time an idealist. As there was no existing garden from which Bacon described his, extraordinary in so many points; so, while keeping mainly in view the demands and tastes of his time, Lawson also to some extent produces an idealised garden. It would not be so delightful if it were not so. The garden was still a part of the house, and our author, with his description of Woodbines trailing over the doorway, the seemly and comfortable seats of Daisies and Violets, the maze into which his friend, wandering in search of berries, fails to recover himself without help, the mount from which he angles a "peckled trout or sleightie eele"; this garden, in a word, which "makes all our senses swimme in pleasure," is just what we all are attempting to produce, and always coming short of the accomplishment.—B.

Hybrid Perennial Phloxes.

Perennial Phloxes were introduced into European horticulture about 1780, since which time they have been considered as plants of especial merit. When cultivated in pots, they render good service in the ornamentation of apartments, balconies, and corridors. Flowering occurs, according to variety, from the middle of July, even to September.

The principal varieties are: (1) *Phlox pyramidalis* or *maculata*, a native of North America; its stem attaining a height of from 3ft. 3in. to 3ft. 6in., with odoriferous flowers arranged in serrated panicles; (2) *Phlox paniculata*, with straight, brittle stems, from about 1½ft. to 3ft. high, having reversed leaves, at the end of which there is a superb panicle cluster, which is pyramidal and serrated with pedunculate, odoriferous flowers; (3) *Phlox acuminata*, better known under the name of *Phlox decussata*, with lanceolate leaves and stems from 30in. to 40in. high, which are straight, and terminated by a round cluster of flowers of a rose-lilac hue. This is a very simple plant, and can be grown in most indifferent soil, having also the advantage of withstanding drought. It is undoubtedly owing to these qualities that seedsmen and amateurs have applied themselves to the improving of this plant. Numerous varieties of the hybrid perennial Phlox are now comprised under the name of *Phlox decussata*.

All the beautiful varieties obtained from seeds come from the crossing of the *Phlox paniculata*, *pyramidalis*, and *decussata*. In point of fact, it is from the latter that, as a result of the persevering and intelligent selections that have been made, the most remarkable varieties have been obtained with hues varying from the purest white to the darkest red.

The cultivation of the hybrid perennial Phlox is very simple, for these plants will grow in all soils, irrespective of the situation. It should be mentioned, however, that they grow best in good soil, and in a place where they are favoured with the sun. They can be multiplied by seed, division of the crowns, or by cuttings.

SEED.—Seed plots of perennial Phloxes can be made all the year, though, preferably, as soon as the seeds are ripe in October. Furnish a well-drained bed. The raising of the seeds is very slow and risky, sometimes even only springing up the second year, especially if sown in the spring. When the plants have a few leaves they are transplanted 6in. apart. As a rule, seed plots are only used by specialists endeavouring to obtain some new varieties, for the various methods of multiplication are far simpler and quicker.

Division of the crowns is best done in the spring. Perennial Phloxes can also be multiplied by bedding the branches in the soil in August or September, and, if well watered, these branches will soon take root at all the nodes which are buried.

Cuttings are useful where a large number of subjects of the same variety are desired. They may be taken during the whole year, though it will be easier to operate with young shoots, inserting them in a light and sandy soil, covered with a bellglass or in a frame. Once having taken root, they are planted in the nursery until the time arrives for putting them in their respective places.

Phlox subulata or *frondosa* are ornamental for rockeries. *Phlox setacea* was introduced from North America in 1786, along with the *Phlox Nelsoni* and *nivalis*. *P. reptans*, also introduced from North America in 1800, is cultivated under the names *verna* and *stolonifera*. This is a very different plant on account of its rounded leaves, which are thick and silky; as likewise by its purple-red cyme inflorescence and its uncovered and viscous flowers. These different species of Phlox make delightful border plants from the end of April to May, and even June. They can, moreover, be easily multiplied by dividing the clusters.



Cattleya x Oweniana.

It was in 1892 that this very beautiful flower received a first-class certificate, and like so many other of the choicer hybrids, the stock of plants has increased very slowly. The lip has a rich velvety crimson apex, and in form it narrows at the throat, which is deeply veined with gold, as are the side lobes. The sepals and petals are white. Though the parentage was not recorded at the time when the award was made, it was suggested that *C. gigas* and *C. aurea* were the progenitors.

The Week's Cultural Notes.

We have few more thirsty subjects than *Odontoglossum citrosum* when growing freely and well established. The roots appear able to deal with very large supplies of water, and unless they get it the pseudo-bulbs will not swell up to their full size, consequently the flower spikes will be weak. *O. grande*, too, and its allies *O. Insleayi* and *Schlieperianum* can do with full supplies now, as both growth and flower spikes are forming. Just now there is something exceptionally attractive to insects about these last named species, and unless the greatest care is exercised, both flowers and growth will be ruined. Standing the plants in saucers of water on other pots inverted is a good protection in the case of slugs.

In the cool Orchid frame a little soot and lime should be sprinkled over the ashes, or shingle that is used for standing the plants upon, the ammonia rising from this being of great benefit to the plants, and distasteful to slugs and other insects. A little air must be left on top of the frame all night, the only time for entirely closing it being late in the afternoon. Even then air will be admitted below if the frame is, as it should be, propped up by bricks at each corner.

In some cases *Oncidium macranthum* and other of this set will be producing roots from the base of the growths, high up out of the compost, and in order to save these from insect attacks, and allow them the benefit of the compost, a little moss and peat should be placed near them, to conduct the roots, so to speak, to their proper place in the pots. These, too, require abundance of moisture now after the strain of flowering, liking it both on the leaves and roots.

Cattleya citrina is now at its quietest period, and should be suspended near the roof glass in the coolest house. I am not an advocate for overdrying this species at any time, but its very habit of growth shows that it dislikes much water, especially over the foliage, and now that it is practically at rest quite sufficient for its needs will be drawn from a properly moistened house. The use of the syringe is to be avoided, and only occasional moistening of the roots allowed. Cork blocks lightly dressed with moss are best for growing this species upon; it never seems happy in pots. —H. R. R.

Propagating Pansies and Violas.

Pansies and Violas are interesting flowers because of the wide range of diversified colours they present, and the length of time, Violas especially, continue in bloom. In many bedding arrangements Violas form an excellent groundwork and also pleasing edgings to beds. Pansies should be grown in beds to themselves or be associated with spring flowering plants. They flower the best in the months of April and May, after which time the plants may be removed for summer bedding.

Violas continue to flower longer and are more or less attractive throughout the summer, if the soil can be kept moist and cool, and due attention is given to removing spent blooms. A mulch of rotted manure is beneficial, as it prevents moisture from the soil evaporating, and will supply some sustenance to the roots when it is occasionally copiously watered.

The present is a suitable time to consider the best means of raising a fresh stock of plants to insert in autumn for spring flowering. It is possible to do this by both seed and cuttings. The former plan must be resorted to where no plants are available to obtain cuttings. Fortunately it is a most interesting method, and the plants obtained grow away freely, a large majority of them proving of good quality and free flowering.

The seed, which should be obtained from a reliable source, may be sown in a cold frame, or even outdoors in a shady border. Draw shallow drills 3in apart, making the soil moderately rich and fine previously. Scatter the seed thinly and cover sparingly with very fine soil. Shade to prevent evaporation, but if the surface soil dries, sprinkle on water with a fine-rose can. No thinning out should be necessary until the seedlings are large enough to prick out singly. This may be done on a finely pre-

pared border of soil composed of loam, leaf soil and decomposed manure, not using too much of the latter ingredients.

Lift the seedlings with as much root as possible, and prick out 2in apart. Having received hardy treatment the little plants are short and sturdy. Give them a gentle watering, and continue to do so when necessary. This will be all that is required until the autumn, when they are ready for lifting and planting.

In raising plants by cuttings it is important to note that the best shoots for the purpose are secured from the base of the plants. They are usually produced freely onwards from the present time. To facilitate their production in the case of Pansies it is best to cut away the old growth as soon as signs are given of diminished vigour in the flowering. The same may apply to Violas, but under moist treatment the shoots will be produced along with the flowering. Those not showing flowers are the best. Frequently they may be secured with some small white roots attached.

Thick stemmed growths with large leaves do not make good cuttings, being hollow in the centre, and though they may look so promising they eventually die off, while those of slender appearance keep fresh and soon root. The preparation of the cuttings is simple. Some will need none, while others only require the small leaflets at the base nipping off, and the stems cutting to a joint.

Those having short, white rootlets or a portion of blanched stem may be dibbled in as they are. Use a small, blunt ended stick, making the hole no larger than necessary. The surface inch of soil should be made light, fine and sandy. Prick the cuttings out 1½in apart, in rows 2in asunder. See that the base of each cutting touches the bottom of the hole. Press the soil closely round. Carefully label the colour or name of variety, and when all are inserted give a copious watering with a fine-rose can.

The best position for the cutting bed is on the shady side of a wall or in a frame which can be readily shaded. The cuttings must be kept moist by occasional sprinkling. All being well they will be sufficiently rooted for planting in beds or borders in autumn.—E. D. S.

Certificated Plants.

(Continued from page 560, vol. xlv.)

PASSION FLOWERS.—The only seedlings from the hardy *P. cærulea* to receive an award from the R.H.S. is *Constance Elliott*, a pale, almost white variety, certificated in 1884. At one time there were to be seen in many of the suburbs of London fine examples of the common hardy species growing against the walls of villa residences, but the severe winters during the past twenty years destroyed most of them. Some species have received awards, but they are rarely met with in gardens. The most numerous cultivated in greenhouses and stoves are *P. edulis*, which produces large purple fruit, and *P. quadrangularis*.

PENTSTEMONS.—I can well remember some of the earliest improvements made with *P. Hartwegi* (*gentianoides*) in the early forties, and it had much to do with the development of the flower; so probably had *P. cobæa* and *P. glaber*. It was not until 1861 that the *Pentstemon* received recognition by the R.H.S., when *Lobbianus*, not, it is presumed a species, received a certificate of merit, followed by *Blue Beauty*, *Compactus*, *Mrs. Steans*, and *Princeps* in the following year. Thenceforth, the progress of the flower was rapid, and the energies expended by Scotch and Continental florists in its improvement have culminated in the development of large *Gloxinia*-like blossoms of great beauty; and though the fine modern improvements are of such vigorous growth, yet difficulty is experienced in keeping the plants through the winter after flowering when in the open ground; hence it is necessary as a precaution to perpetuate fine seedling varieties by means of cuttings. Awards of merit are now made to strains rather than to individuals, as the aggregate of quality is so high.

PERNETTYAS.—Mr. Davis, of Hillsborough, Co. Down, did great service to horticulture when in the seventies he produced his seedling *Pernettyas*. He crossed *P. mucronata* and *P. angustifolia*, and obtained robust growing varieties producing large clusters of varied coloured berries according to the variety, and between 1878 and 1882 he received as many as seven certificates of merit for varieties either with white, flesh-coloured, lilac, black, or crimson, &c., berries. They are of great value as decorative subjects in winter.

PETUNIAS.—Fifty years ago the *Petunia* was rapidly becoming popular as a florists' flower. It was not till 1823, when *P. nyctaginiflora* was introduced, followed by *P. violacea* in 1831, that florists had material to work upon. The two readily lent themselves to crossing, and yielded in their progeny much variation. I have a lively recollection of the interest created by such varieties as *Lady Cullum*, *Novelty*, *Major Domo*, and *Hermione*, certificated by the National Floricultural Society previous to 1858; and also of *Shrubland Rose* and *Countess of Ellesmere*, popular rose-tinted bedding varieties. It was not till 1861 that a *Petunia* received an award from the Royal Horticultural Society,

when the once popular *inimitabilis flore-pleno* won this honour for Messrs. Veitch and Sons. That was followed by Butterfly (Holland), Mrs. Ferguson (Ferguson), a charming variety in those days; Emma (Bull), and Eliza Mathieu (G. Smith), &c. In those days the small, finely formed, striped and self varieties found most favour. Now we have a race of large, ill-shapen, flabby varieties of Continental origin, to the exclusion of the florists' type; but there is evidence that these well-formed, stout, small-flowered varieties are coming to the front once more. The Petunia, formerly a popular exhibition plant, has ceased to be so. The specimens seen at our large flower shows are in the form of market grown stuff, but they are of great service in the garden in summer, their great freedom and continuity of blooms being one of their chief recommendations.

PHILADELPHUS.—The Floral Committee had been in existence for a quarter of a century before an award was made to a member of this genus, a species named *mexicanus* being so recognised.

mittee was to a variety named Orion, in 1860. Of late years several fine standard varieties, such as Avalanche, Coquelicot, Eclairer, Iris, Lord Rayleigh, Torpilleur, &c. In addition many awards have been made to varieties growing in collections at Chiswick. Most of the new varieties of recent years have come from abroad. The growth of these is generally dwarf and bushy, the individual flowers large, and the trusses of bloom bold and striking. New varieties also emanate from Scotland, especially of the *P. suffruticosa* type. The Phlox is, in many parts of the country, a favourite subject for exhibition.

PHYLLOCACTI.—Seeing that all the awards made to new varieties of this group have been made within the last twelve years, it is obvious the improvements which have been made are of comparatively recent date; or at any rate, it is during this period they were submitted for recognition. It is worthy of note that about 1870, Colonel Charleton, Farm Hill, Isle of Wight, bloomed a series of beautiful hybrids, obtained by him from cross-



Cattleya × *Oweniana*.

Other species, such as the scentless Virginian *inodorus*, the hybrid *Lemoinei*, and *microphyllus*, a small leaved form, were similarly recognised. The latter is one of the prettiest of the Moek Oranges, and is quite distinct from all other species, the pure white flowers being produced in great profusion. Of the sweet scented coronarius group, *Boule d'Argent* and *Mont Blanc* are very fine additions to our hardy flowering shrubs; and no garden can be said to be complete unless this group is well represented.

PHLOX.—Here is a genus which comprehends several types, ranging from the dwarfest forms of *P. subulata* to the tall growing varieties of *P. suffruticosa* and *P. decussata*, and the large group of annual varieties headed by *P. Drummondii*. *P. divaricata*, shown under the name of *P. canadensis*, and *P. subulata Vivid*, obtained awards; but the great bulk of those given by the Floral Committee to new varieties went to the progeny of the herbaceous types. Mr. F. W. Burbidge informs us that "The herbaceous Phlox of our gardens, of which we have now so many forms, appears to have descended from *P. decussata*, *P. paniculata*, *P. suffruticosa*, *P. Carolina*, and other old species of the tall growing section." It would perhaps be difficult to define exactly upon what lines the first award made by the Floral Com-

ing *Cereus speciosissimus* and *Phyllocactus orenatus*; and in the same year the late Mr. C. M. Hovey produced a race of hybrids between the creamy white *P. crenatus* and some scarlet-flowered form. But it remained to Messrs. Veitch and Sons, of the Chelsea Nurseries, to produce the latest developments, and of the seventeen awards made to new forms which find a place in the list of certificated plants, all were for varieties shown by the Chelsea firm.

POLYANTHUSES.—The first form of the giant Polyanthus (*P. elatior*) to obtain recognition was *Golden Prince*, which was exhibited by Messrs. E. G. Henderson and Son as far back as 1868. Since then several others were similarly honoured, but the practice of giving awards to individual varieties is now practically abandoned, and any recognition is now made to strains, as they are generally very good, and much in demand for spring gardening. Of the gold-laced section a new variety rarely finds its way to the table of the R.H.S. What new ones are produced—and they appear only at intervals—are from the north of England; the cooler and moister character of which is more favourable to their well doing.—R. DEAN.

(To be continued.)



The Carrot Crop.

Your correspondent "W. S." may enjoy what satisfaction can be extracted from my experience of the Carrot crop this year generally in learning that things with him and in his locality are no worse than they are elsewhere. We seem this year to have almost universally suffered from a Carrot epidemic, for never in the history of Carrot culture, so far as I know, have these roots looked worse, or has it been more difficult to obtain a decent plant. Here is a subject of real importance which may well merit the attention of that not too practical body, the R.H.S. Scientific Committee, for it has not been possible for growers to determine the causes which have led to this comparative Carrot failure. Just recently I heard one of our leading Middlesex gardeners say that he could not get a Carrot plant anyhow. Just recently, too, I have been examining hundreds of gardens and allotments in all parts of the favoured county of Surrey, the Carrot county par excellence, and the proportion of decent Carrot beds found is about 10 per cent. Generally the beds are of the most miserable nature; indeed, the plants have almost disappeared. One or two quite good beds may be seen in the same locality, and on precisely similar soil, where there are also twenty wretched ones. The time growing and general culture has been the same, but the results have been so dissimilar.

On all bad beds the leafage is infested with the Carrot aphid or lice, which is sucking the juices from the plants. In one little garden at Carshalton where there were a few very respectable rows, a very old man said that he saved his by making paraffin emulsion—two wineglasses of paraffin to a gallon of water—well working it through the syringe, then gently spraying the plants. Still, there was the odd fact that some good if small beds were so without having been sprayed at all. I have observed that where any of these cottagers sowed seed early in July to secure a winter pulling crop that they had an excellent clean plant. I should think, aided by these recent rains, there will be no difficulty in getting good clean beds from July sown Carrots for winter use where they were wisely sown. I have wondered whether the general failure of the Carrot sowings was in any way due to old seed. Last year was not a good seed year for many things, and if the Carrot crop was a bad one, then a good deal of old seed or imperfectly matured seed may have been sent out, and allied to the cold spring the result would naturally be imperfect or weak germination, and equally weak growth, upon which the Carrot aphid would speedily prey. Old seed may germinate well in warm soil in July, yet badly in March or April when the soil is very cold. However, the suggestion is purely hypothetical. The fact remains that the Carrot failure is a very general one.—A. DEAN.

Hints on Budding Roses.

No amateur has, I believe, read with more pleasure than I have the "Garden Notes" which have appeared at intervals in the columns of the "Standard" on general subjects connected with the popular study and practice of horticulture. The advice given has been so admirably simple, within the compass of the veriest tyro, and thoroughly up-to-date; while the style in which the advice is given is so broad and exhaustive, so scholarlike and technical (just academic enough without being unduly pedantic), that "Garden Notes" whenever they have appeared have been hailed with universal acceptance, not only by devotees to gardening, but glanced at by most readers, who find enjoyment in obtaining information on a subject like horticulture at all seasons of the year, directly or indirectly, full of interest when treated with that ability which can only come from the hands of a writer of great experience and thorough master of the varied subjects he treats about. The readers of our Rose Journal, I believe, will join in my surprise when I read in "Garden Notes" in the "Standard" of July 22, in a detailed account of the practice of budding Roses, that "a 4in long cut should be made, that is, about the same length as the sheath of the bud intended for insertion." Now this is so manifestly wrong, and I hold so unusual, that I should be inclined to attribute it to an error of the printer were it not repeated twice, as being of extreme importance. All other directions on the subject are good; this undoubtedly is wrong

and dangerous, as 2in is well within the normal length of any bud to be inserted—indeed, I can fancy the smile on reading the passage that would creep over the faces of the vast number of lads who do the budding at the large Rose establishments, while the foreman sees to the supply of well-seasoned buds and that the nomenclature be correct.

Having a long practical experience of budding Roses, I should like to take this opportunity of adding a few hints as to what I have always found cardinal rules for successful budding. First and chiefly (as to Briars), ripe, well seasoned buds, from shoots that have flowered, are preferable, these should be, for choice, as nearly as possible of the same stage of maturity as the wood in which they are to be inserted. Secondly, seeing that it is of the utmost importance that a minimum of friction (or bruising) should take place during the delicate operation, the "slit" should be absolutely straight, when the bud will slip into its place almost invariably of its own accord. Thirdly, on the general principle that "Nature abhors a vacuum," it is equally important that, by pressure of the finger and thumb, the bud inserted should be firmly and evenly located in its new home. Scores and scores of buds fail to unite and become homogeneous with the stock through neglect of these simple precautions. Like every act of ordinary manipulation, practice makes perfect; in point of fact, every budder soon finds out this for himself, by increased despatch over his work and facility of action.

As regard budding on Manetti stocks, this work, barring the stooping, is much easier, and, given plump, well seasoned buds, much more certain in its successful results. The buds are inserted just below the ground, and always tied up with raffia or bast matting, which soon perishes but lasts sufficiently long for the bud and wood to unite. I prefer for Briars cotton (four to six thread hanks) in preference to wool, as not cutting into the wood and a far better preventive against heat and cold. Certainly bast is not to be recommended, as by the writer in "Garden Notes," for Briars, though, as aforesaid, necessary for Manetti budding.

In tying up, I have only to add that the general practice is to bring the cross-ties very flush over the cap of the bud, and not too close in front of the bud, and this chiefly for the reason that the bud should repose on an even surface everywhere on the wood.—HEREFORDSHIRE INCUMBENT.

Wanted—Slaves.

I take the liberty of sending you the enclosed, which is one of the answers I received from an application for a situation. In common with many gardeners I appreciate the many efforts you make through your Journal to improve our prospects. I do not want the letter again, so that if it pleases you to print it you are welcome to do so. I think you will agree that the person writing asks rather a lot.—J. R. E., July 16.

The letter referred to is the following:—"In reply to your letter, what I want is a married couple, without family, industrious, sober, honest, and trustworthy. The house is quite a small one, and I do not entertain, except occasionally to tea, but I sometimes have visitors. There are no lawns, only grass plots in front with flower beds and borders. There is a rather large kitchen garden where Potatoes and the usual vegetables are grown. There is a small conservatory and a range of glass houses—two 100ft by 12ft, and one 80ft by 17ft—where pot plants, Tomatoes and Cucumbers are grown for sale. One of these houses is heated by hot-water pipes.

"I usually have a boy to help, and there is one now; but I may not always be able to get one. I require the gardener to be well up in his work, and not to need constant supervision. I do not require him to be an abstainer, but he must be sober, and as there is a publichouse opposite my side gate I strongly object to his frequenting it in the daytime. I expect the place to be kept neat and clean—like a gentleman's residence. There is also a meadow and I have had, and may again have a pony for riding.

"The wife must be a good plain cook, do all the housework and mending, and help the woman who comes to do the washing. As I am often away from home I must have trustworthy people who can be left in charge. The wages are £1 a week, with the kitchen and bedroom, coals and light, vegetables from the garden, but not other food. The situation will be vacant in about three weeks' time."

Holidays in Belgium and the Ardennes.

We have received a copy of the Great Eastern Railway Company's new illustrated booklet, entitled "Holidays in Belgium and the Ardennes," by Percy Lindley, describing new inexpensive holidays, via Harwich and Antwerp, in Flanders and the Ardennes. A special feature has been made of the tinted illustrations. Apply at 30, Fleet Street, London, E.C.

NOTES

NOTICES

Gardening Appointments.

Mr. Joseph Booker has succeeded Mr. E. Bambridge as head gardener to Lieut.-Colonel Shipway, at Grove House, Chiswick, London. Mr. Bambridge has been appointed head gardener at Dene Park, Tonbridge, Kent. * * Mr. David Murray, for the past two years foreman in the houses at Carberry Tower, Musselburgh, has been appointed head gardener to J. D. Cobbold, Esq., Holly Wells, Ipswich.

Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, August 4, in the Drill Hall, Buckingham Gate, Westminster, 1 to 5 p.m. Special prizes will be given for Cactaceous plants. A lecture on "Landscape Gardening" will be given by Mr. H. E. Milner, V.M.H., at 3 o'clock. At a general meeting of the society held on Tuesday, July 21, thirty-six new Fellows were elected, among them being Lady Arthur Hill, Lady Margaret Cecil, Sir Philip Magnus, and the Hon. Gerald Ponsonby, making a total of 1045 elected since last January 1.

The Veitchian Cup.

In order to celebrate the jubilee of the establishment of a business in London (Mr. James Veitch, jun., having come to Chelsea in 1853), Messrs. James Veitch and Sons, Ltd., have presented to the Royal Horticultural Society five silver-gilt cups of the value of fifty guineas each. This liberal offer has been accepted by the Council, and the following conditions drawn up: The cup will be known as "The Veitchian Cup," and one will be awarded once a year to the best individual exhibit in the opinion of special judges at the Temple Shows of 1904, 1905, 1906, 1907, and 1908, or any other leading show held under the direction of the Society the Council may determine. The successful exhibit may be either a single plant, or a group, a novelty, or an example of culture. The cup will become the property of the winner each year, and he will be required to make a declaration that the exhibit is his own property, and has been cultivated by him for fourteen days previous to the show. The judges are to be seven—three amateurs, two gardeners, and two nurseryman or seedsmen—to be selected by the Council. No exhibitor can win more than one cup.

Exhibition of Edible Fungi.

On Tuesday, September 15, the Royal Horticultural Society will hold an Educational Exhibition of Edible Fungi in the Drill Hall of the London Scottish Volunteers, Buckingham Gate, Victoria Street, Westminster, and a lecture upon them will be given by Dr. M. C. Cooke, M.A., V.M.H., &c., at three p.m. All interested in extending or acquiring the knowledge of the edible species are invited to send collections. Collections should, if sent, be delivered at the Drill Hall, on Monday afternoon, September 14, or if brought, should arrive at or before nine a.m. on the Tuesday, so that they may be properly grouped and arranged by the fungus specialists. Collections should consist of any fungi supposed to be edible. Each specimen should be wrapped separately in thin or tissue paper, and packed so as not to get loose or shaken in transit. When the names are known by the senders they should be neatly written on card and enclosed, but if not known they will be named by the experts. The society will pay the carriage of all collections, and will award medals according to merit. The best collection will be considered to be that which includes the largest number of edible species shown in the best condition. When the senders are doubtful as to whether any of the specimens are edible or not, the matter will be determined by the experts. Unnamed collections will also be examined, named, and sorted into edible and poisonous by the experts as far as their time will permit. All specimens will be destroyed at the close of the meeting unless removed by the senders. Intimation of an intention to exhibit should, if possible, be sent a few days before to the Secretary, R.H.S. Office, 117, Victoria Street, London, S.W.

A Wonderland of Trees.

Nowhere else in the world is there such a forest of trees as that which spreads itself on the Rocky Mountains. Thousands of miles one may wander and never escape the enclosing silences of this wood. Across British possessions, through endless reaches of snow-capped mountains, and onward to Alaska, nothing but trees and trees—Cedar, Fir, Hemlock, Pine, Spruce. Turn to the south. For a thousand miles of Sierra, through the heart of California, where grows the Sequoia, the monarch among trees, to the very deserts of the Mexican border, and still one finds this forest covering all the hills, thick, silent, and all but undisturbed. —("The Sun.")

Fruit in Kent.

Although a number of dismal reports have reached us as to the disastrous fruit crops in Kent this year, it is pleasing to learn (says the "Kent County Standard") that Apples will be a trifle better than was predicted six weeks ago. The home supply of fruit, we are told by a correspondent, would be still greater if it were not for the uncertainties of the seasons. If these could be minimised by an extension of cheap, artificial protection from the weather it would be a great advantage to the producer and consumer. Whether the expense would be justified is the point for consideration. There has already been an immense increase in the area under glass for the Cultivation of Grapes, Cucumbers, Tomatoes, &c., and it may be that the scarcity of British fruit attempted to be grown in the open this year will result in such an increased demand for varieties cultivated under cover as may tend to a further extension of the system and its application, in a cheaper form, to other crops.

American Apples.

The great Apple district in America lies in the country bordering the great Lake Ontario—half in Canada, half in Western New York. The Apples of Michigan and Missouri now find a market in the cities of the West and South. Their keeping qualities are not quite equal to those of Canada and New York. Last year the months of May and June, after the time of blossoming, were excessively cold, with constant and copious rains, succeeded in July by abnormal heat. One quarter of the Apple leaves turned yellow and fell off, and then there developed a new or very rare disease called "pink rot." This is a well-known fungus, but heretofore it has only attacked dead wood, and to find it on growing Apples was an unlooked-for calamity. It was first noticed in August, in the form of a white or pink mildew around scabs. Later it produced a brown, sunken, rotten spot with a bitter taste. The spread of the trouble was very rapid. It developed in fruit packed for shipment, and ruined many thousands of barrels, which had to be thrown away or sent to the jam factories. So far this year the weather conditions have been ideal. The trees blossomed freely, though many of them only on one side. During the whole of May there was practically no rain, the pollination was perfect, and the fruit set finely.

Importation of Fruit.

The fruit import statistics for the past month contain some striking details. The Apple receipts for June are larger than they have been for a corresponding period for the past three years, says the "Yorkshire Herald." The total for the six months ending June is 1,221,818 cwts, valued at £808,989. As to Bananas, despite the huge consumption last year, they are increasing in popularity by leaps and bounds. Though we have a full crop of Gooseberries this season, yet the imports of this fruit are larger than they have ever been before. The imports equalled 14,862 cwts. The total value of the Gooseberry imports up to date is £13,748. This is most significant. The Red and Black Currant imports came to 5,465 cwts, for June. Last year for the same period the total was 3,027. There has been an increase in the Grape imports, the bulk of which come from the Channel Islands. This past June we paid £61,418 for Lemons. The quantity imported was 135,874 cwts. This shows an increase of 52,686 cwts compared with the receipts for June, 1902. The total value of the six months supply ending June was £215,117. The Tomato imports were larger this past month than they have been for three years for the same period. 146,895 cwts were sent us, and they cost us £122,533. In addition to the fruits named, the arrivals of Oranges, Pears, and Plums were of a very satisfactory nature.

Southampton Show.

It gives us great pleasure to state that we owe much of the excellence of the interesting views of this show given last week to the special consideration shown to our representative by the secretary, Mr. Fudge.

The School of Handicraft.

The annual outing of the School of Handicraft Garden and Farm Boys and Staff, accompanied by the band of the school, was held on July 16, when they proceeded down the river to Maidenhead on the "Sunbury Belle" accompanied by friends. The gardens on the river side were much admired, the Roses looking particularly well, and the house boats. The thanks of the boys, &c., are tendered to all who helped towards the outing. Amongst them being Mr. H. Veitch, Cooper, Faber and Co., Sutton and Sons, Watkin and Simpson, Hurst and Son, H. B. May, and others. The party was under the charge of Mr. A. J. Brown, horticultural instructor.

A Strawberry Feast.

On a recent sunny morning, two costers were gaily flying down Piccadilly in a ramshackle cart laden with fruit and vegetables. Strawberries were amongst the complement, but, alas! they were loosely packed, and the swaying and jolting of the vehicle was the means of scattering these soft and luscious products broadcast over the roadway, and there they lay or rolled like the gravel that the scavengers scatter, much to the amusement of the hackney drivers and 'bus-men. But a trio of street arabs made good the occasion by diving forth among the traffic, greatly to the danger of their lives, but to the betterment of their stomachs once they safely landed back upon the kerbstone. They had a Strawberry feast.

"The Century Book of Gardening."

Less than two years ago this book was published by Geo. Newnes, Ltd., Strand, London, and was so successful that a second edition is already well on the way to completion. This is being issued in sixpenny parts, and we have contemplated a brief review of the earlier issues, which, however, our other duties have precluded our giving. The parts are now up to No. 12, and as the whole phase of gardening is treated herein by experts, the illustrations being numerous and beautifully reproduced, we have no hesitation in saying that it is well spent money to secure the numbers as they come out, and a bound volume can be made when all are issued. When the last appears, if not before then, we hope to be able to give the work due notice. Mr. E. T. Cook is editor.

The "Undergraduates" at Kew.

There are sixty of these young men at Kew, and not one among them could fail to make more than the living wage of a guinea a week which they are allowed. For no applicant is considered who has not served five years as a gardener and acquired a knowledge of all the manual details of the trade. When the young gardener obtains his place at Kew he is at once taught that he is one of the aristocracy of the profession. The labourers may dress as they please. The gardener must appear in a blue serge suit, with flannel shirt and low collar. And he works. For those two years he has a twelve-hour day, from six to six, and when that day is over he is ready to take his place in the lecture-room, notebook in front of him, and dive into the chemistry of plant life. No one but a man determined to succeed in life would throw up his easy job and return to the labourer's wage for a couple of years—*pour mieux sauter*. The reward comes, however, and the Kew degree—or rather the Kew certificate—holds good all over the world. From King Leopold's private gardens to the Botanical Gardens of India and South Africa you will find in charge the man who put in those two years at a guinea a week at Kew. And the curator of the Kew Gardens himself; Mr. Watson, a man whose knowledge of all things that grow is an amazement to those who consult him, was once a gardener undergraduate. Now that the gardens are filling up with early summer visitors you may be advised to turn for a moment from the show places and the tea tables to look at those keen young men who are fighting their way from gardening to botany. For these are the men who are to aid Nature in planting the earth with what it will foster; the men who are intent on making two blades of grass grow where but one grew before.—("T.P.'s Weekly.")

Tree Planting in South Africa.

Mr. J. Barclay revives an old suggestion for the "amelioration" of South Africa. He pins his faith to trees. He writes: "An afforestation of the country to the extent of from five to ten per cent. would undoubtedly materially alter the climate for the better. Since the plantation of woods around Johannesburg the annual rainfall in that district has increased by three inches. By planting the ridges of the rolling plains of the Orange River Colony, their area would be protected from the scorching hot winds of summer, and their moisture would percolate to the lower lying soil, while the general increased moisture of the soil would very likely mitigate the severity of the terrific summer thunderstorms."

East Ham and District Horticultural Society.

A large party of members and friends of this society, to the number of about 130, visited the gardens and grounds of Gunnersbury Park and Gunnersbury House, on Saturday last, by the kind permission of Leopold de Rothschild, Esq. The day was beautifully fine, and the visitors were free to visit the houses and all portions of the grounds, and they appeared to greatly enjoy their beauty, and the evidences of high class gardening seen on every hand. The Japanese garden and its surroundings, together with the long window tank containing the blue Water Lily, *Nymphaea stellata*, were great features of attraction. Tea was served in what was formerly the conservatory adjoining Gunnersbury House; and as the shades of evening began to fall, the visitors took leave of the charming grounds deeply grateful for the permission given to view them.

Prices of Fruit.

New Lisbon Apples are selling at 14s. a case first hand. The fruits are medium in quality, but the supplies will be plentiful. Some very fine Mangoes from Bombay have made their appearance in Covent Garden Market. They are selling at from 12s. to 18s. a dozen fruits. Vegetable Marrows bring from 4s. to 8s. a dozen in Covent Garden Market, the usual price in ordinary seasons at this time of the year being from 3s. to 5s. per tally of sixty. Scarlet Runner Beans sold at 6s. a dozen pounds, which is the highest price for the first consignments known. Huge quantities of Bilberries are being imported this season in consequence of the scanty Black Currant crop at home. In one week recently as many as 20,000 packages were unloaded at Grimsby.

A London Fuchsia.

London's atmosphere in Finsbury was amply vindicated on Saturday at the Cottager flower show, which was opened in Peel Institute, St. John's Lane, Clerkenwell. A Fuchsia, reared at the model dwellings in St. John's Square, was of such remarkable growth (says the "Daily Telegraph") that Mr. Dean, F.R.H.S., said it deserved photographing. It stood nearly 4ft high, and was 3ft across; and Mr. J. W. Tosh, the hon. sec. of the show, assured the audience that four years ago the grower (Mr. Bird) bought it as a small penny plant. There were 300 exhibits in the show, all testifying a surprising healthiness, seeing that they had been grown on window sills, on the roofs of the houses, or in the backyards. The ex-mayor (Mrs. W. Howes) presented the prizes.

The Protection of Orchards.

Although the Prevention of Diseases (fruit trees) Bill has been dropped, the movement in favour of legislation for the protection of orchards and plantations is being vigorously pursued. Mr. C. W. Radcliffe Cooke, who is taking a leading part in the matter, seems to anticipate that the objections of nurserymen will be met if the provisions of any future project of legislation are extended to all fruit growers. He writes:—"That any measure of the kind will occasion some trouble and inconvenience to the nursery trade is undoubted, but not more than agriculturists now experience by the working of the Acts relating to the diseases of animals. Just as farmers submit, often at great inconvenience and pecuniary loss, owing to the provisions of, and the restrictions imposed by, the Acts dealing with the contagious diseases of animals, such as foot and mouth disease, anthrax, sheep scab, and swine fever, because they know that their industry at large will be benefited by the stamping out of these diseases, so nurserymen and fruit growers will, it is to be hoped, exhibit an equal amount of self-denial and public spirit for the sake of the industry in whose healthy and flourishing condition all of them are concerned."

Raising Seedling Carnations.

The raising of seedling Carnations is one of the most fascinating pastimes the experimenter can engage in. It is fraught with hopes, fears, and disappointments, and frequently, to the severely practical man, apparently unjustifiable elations. There is a number of practical florists, and some amateurs, engaged in the raising of seedling Carnations with a view to their improvement, and there are many others who would take up this laudable undertaking if they knew just where to begin. It is for the latter class that this article is prepared.



Fig. 2.

It is interesting to know the origin of meritorious varieties, not for the purpose of repeating the experiment, for it is ten thousand chances to one that the results would be the same, for there are rarely or never two varieties that might be pronounced identical, even from the same seed pod. But it is so much knowledge to our credit, and it may act as a guide for future operations. Though he who thinks he will electrify the floricultural world by his achievements after he has learned the pedigrees of the best sorts by heart may be disappointed, yet such is among the possibilities.

A novice might effect a cross between two varieties without any idea as to what the effect would be, and the result might be greater than that of a person who has been experimenting with a definite object in view for years. This is where that element which is known as luck comes in. Yet there are very few, we venture to say, who have ever indulged in this mild form of excitement who would throw aside system, no matter how fortunate someone else may have been in a haphazard way, and depend entirely on luck. We believe in pedigrees, for by careful records, with close observation, we may note the influence of varieties as breeders; some may be much more potent than others.

In explanation of the illustrations, fig. 1 is a Carnation flower showing the pistils prominently, which may be called the pistillate, seed or female parent, all of which are synonymous terms. Fig. 2 is a flower which shows the stamens conspicuously; these furnish the pollen with which to fertilise the pistillate flower. Generally speaking, a Carnation flower may be made either the pollen or the seed parent, as the operator may determine, though there are exceptions to this rule. We found this out some years ago when hunting among some flowers of the variety Duke of Orange for pollen, but not a grain could we find. On the other hand, we have operated upon varieties which did not produce perfect seeds.

In fig. 3 we find a representation of a flower ready to be operated upon. The petals have been carefully removed with the finger and thumb, part of the calyx has been cut away by a sharp pair of scissors, showing the ovary with the pistils standing out above.

Fig. 4 gives the stamens and pistils. The stamens are the more apparent, and shows the pistils

before they have developed far enough to be fertilised. Fig. 5 is similar to the last. On close examination it will be seen that some of the pollen cases have burst, thus freeing the meal-like pollen which may be carried by a camel's-hair brush, to which it readily adheres, and applied as seen at fig. 6, where the operator is in the act of applying the pollen.

Camel's-hair brushes may be obtained at a very trifling cost. Where there is any choice it is best to select the darkest brushes, as the pollen grains are more readily seen on this material than when it is of a greyish colour, thus giving the practitioner a better idea what he is doing. In all our operations there is always a danger present and a possibility of self-fertilisation. To avert this



Fig. 1.

it is better to remove all the petals and stamens at an early stage of the flower's development, before the stamens have had time to ripen its fructifying grains, thus destroying a possibility of frustrating our plans.

Fig. 7 gives an idea how the seed pod should look when it has advanced somewhat, although this illustration is more to show the manner of keeping a record of the cross made. Some prefer to mark the tag only with a number and to keep in a note-book the full particulars, but if the note-book happens to get lost the numbers are very little value. A full record on the tags is best, then there is little or no danger of losing it.

It is cheaper to buy the little tags than to make them. They are sold with strings already attached, which renders them easily adjusted, and gives the whole operation a neat and workmanlike appearance. In recording the cross, the name of the seed parent comes first. Whether it is correct to make a plus mark or a multiplication mark (\times) we have not been able to determine. We may multiply varieties without adding to their quality. Each one may make the mark which suits him best.

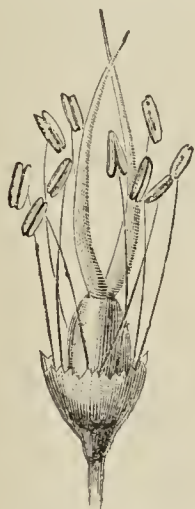


Fig. 4.



Fig. 5.

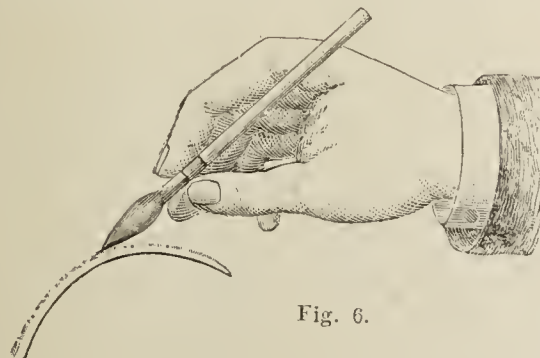


Fig. 6.

Carnations from Milburn.

Writing from Milburn Gardens, Esher, Mr G. H. Cook says: "I am sending you Carnations,

Princess of Wales, Cecilia, and a red one as yet unnamed. They have been grown precisely under the conditions described by me in my article on page 3 (last vol.) of your journal. My method of wiring may be of interest to some of your readers. I find it very satisfactory, and much better than the rings or tying them."

[Mr. Cook's wiring is simple. He uses pliable wire, this being looped under the petals about the top of the calyx, the rest of the wire being twisted round the flower stems. They can be fastened to a stout stake down amongst the foliage. His flowers were very good samples.—ED.]



Fig. 7.

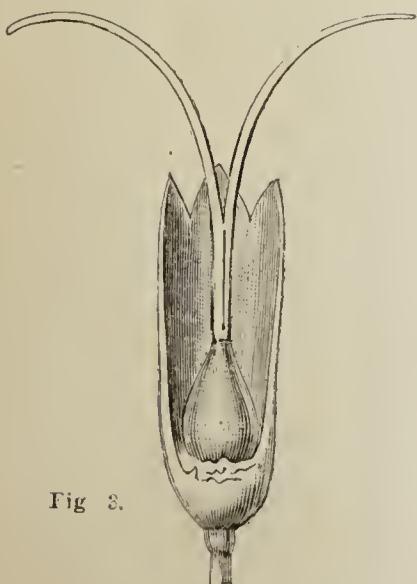


Fig. 3.



Early Outdoor Peaches.

In a large measure, due to the cold and chilling spring, the early Peaches, what few there are left, are ripening prematurely, and in advance of last year's date. Every fruit gathered so far has split stones, a failing sometimes attributed to an absence of sufficient lime in the soil.

The trouble complained of is not an annual one here, indeed; but very rarely has there been a split stone fruit gathered in previous seasons. Ample lime is afforded for stone fruits, obtained, when possible, from demolished buildings. When this source fails, then newly-slaked lime is applied, and since the growth of the trees is so free, and the usual tendency to bear fruit with an ordinary freedom, soil condition cannot be so very far wrong.

The greater wonder, however, is not that the stones should have become ruptured, but that there are any Peaches at all left remaining, for the spring frosts were so severe that there appeared then no prospect at all. The weather has been a series of extremes so far this year. Cold winds, frost, heavy rains, and hot sun have been successive experiences. Alexander and Waterloo are the varieties grown for early gathering outdoors, and which do so well in ordinary seasons.

Last year they bore heavily, and gave fine, well-coloured fruits over a fairly lengthened season. The first fruit then gathered was on July 20. This year the fruit was pulled ten days earlier, but as these are not perfect specimens, and hastened by their ruptured stones, time cannot be said to be fairly gained.

Though Peach trees on the open walls in some gardens now look so well, instances are not wanting where they still show unmistakable signs of the inclement spring. Soil and shelter no doubt account for these troubles, the first-named in particular. It is interesting to note that Peaches, even on glass-coped walls, show an absence of fruit on the lower portion of the walls, say a third of their depth. This is due to the greater extremes of cold near the soil. There are trees bearing their customary crops on the upper portions of the walls, and a few cases are found where a full average are developing over the whole surface, but these must be rare, and due to peculiar and local means of shelter.

Those favoured with a Peach crop have reason to be grateful, for the dearth of other summer fruits will render these of greater than their ordinary value, and be most acceptable for the dessert supply. Amsden June is a variety equally dependable for the open walls, and so is Early Rivers Nectarine, and those provided with an irregular supply from indoors should make an effort to accommodate at least a tree or two of these early Peaches and Nectarines. Hale's Early is a splendid successional variety, hardy, and free fruiting; and Condor is another that deserves a place.

Bud dropping, so common a failing of the American Peaches under glass, is scarcely known outdoors. Instead of a dearth, there is more frequently a difficulty in thinning down the fruits to a reasonable limit.—W. S.

Melons.

LATE FRUIT.—A sowing should be made early in August to afford very late Melons. The plants will be fit to plant out in about a month, they will set fruit in September, and that will be ripe in November. Gunton Scarlet (scarlet-flesh), Middlesex Hero (green-flesh), and Longleat Perfection (white-flesh), are good varieties. A light, airy structure, well heated, is essential with high culture for this crop. Bottom heat is necessary, and is best afforded by hot-water pipes.

EARLY AUTUMN FRUIT.—Good looking fruit is always esteemed, if only from a decorative point of view, and when the quality is high the advantage is duly appreciated. To have fruit ripe in October the plants should be planted out at once, giving them about a barrowload each of soil, made into a flattened cone or ridge about 10in deep in the centre. Rather strong loam, with a fifth of sweetened horse droppings and a sixth of old mortar rubbish form a suitable compost. Make this quite firm, and leave it in a moist state before planting. Turn the plants out carefully, watering them overnight, so that the roots may come freely from the side of the pots, and make the soil firm about the balls. Keep the stem slightly raised, and water to settle the soil about the roots. The plants must be encouraged to make a free growth by syringing at closing, and damping the paths and walls in the morning and evening of hot days. Ventilate between 70deg and 75deg, and keep the temperature through the day at those degrees by artificial heat, 85deg to 90deg from sun, and

close so as to raise to 95 deg or 100deg. Through the night the temperature may fall to 65deg.

FRUIT SWELLING.—The ultimate result must be kept in view from the start, as sturdy plants only produce fine fruit, and this may be spoiled by overcropping the plants. When the fruit is fairly swelling the crop should be reduced to one or two on a weakly, three on a moderately vigorous, four on a strong, and six on a large plant. Overcropping is very prejudicial to the plants' health, and unless the foliage is in good condition to the finish, high quality, which mainly depends on solidity through the high elaboration of the juices, cannot be expected, therefore keep the foliage thin, having full exposure to light. Earth the roots, giving copious supplies of water or liquid manure, and damp the paths with liquid manure twice a week, but it is best to give it often and weak. The weak drainings of stables should be diluted with five times the bulk of water.

FRUIT RIPENING.—The atmosphere should be kept dry and a top heat maintained of 70deg to 75deg by artificial means, admitting a little air constantly, a circulation of rather dry, warm air greatly improving the quality and finish when ripening. Water should be withheld from the house unless there is fruit advancing in swelling, when an occasional damping will be necessary for the benefit of the foliage.

PLANTS IN PITS AND FRAMES.—The latest plants will be setting their fruit, it being important that the fruit be set at the close of July or early in August, to allow time for its swelling and ripening. Give a good watering if necessary before the flowers open, and line the sides of the frame with hot dung, or the mowings of lawns, and give a little ventilation constantly at the top of the lights until the fruit is set and commences swelling. This prevents the deposition of moisture on the blossoms and insures a good set. Fertilise the flowers daily, and when sufficient are set, and the fruit swelling about equal size, remove all flowers, and keep the growths thin and well stopped, maintaining a warm, moist atmosphere, but not stagnant, by early closing with sun heat. Sprinkle the foliage on fine afternoons, and afford water in bright weather about twice a week.—G. A.

Where our Fruit Comes From.

The home crop of fruit will be light, and generally the shortage will be serious. On the other hand, the foreign imports are not only plentiful but varied, as the following facts obtained from inspection of the arrivals prove. The bulk of the Strawberries on sale, says a correspondent to the "Newcastle Chronicle," comes from Holland. A few still are consigned from France, but the season is practically over. The Dutch shippers bring us from 2,000 to 3,000 packages a week.

Peaches put up in shallow boxes reach us from the Paris agents, but at present the arrivals are limited. These growers are sending fair quantities of Plums, the season for this fruit being well opened now. They are put up in baskets and boxes, the latter containing the Green Gage variety. A few Spanish Plums in boxes are on sale. The Red and Black Currants have been grown in Germany, Holland, Belgium, and France, the largest quantity coming from France.

The Gooseberries are of Dutch, Belgian, and French growth. Out of 2,277 packages received last week, 2,149 came from Holland. They send huge supplies of cheap berries into our markets every year. The whole of the Apricots now on sale are French. The growers pay special attention to the culture of this fruit for the English markets. The Apricots are packed in clean one-layer boxes chiefly, and are attractively arranged with the aid of coloured tissue paper. This season, an unusually large quantity of Bilberries are being sold in our markets. They reach us from Germany and Holland, and at the rate of 20,000 and 30,000 packages a week. Black Currants being short this year Bilberries are sold as a substitute for that fruit. In the Midlands these juicy berries are immensely popular. Of course they have not the flavour of the Black Currant; still, they are rising in favour. This is due in a great measure to the fact that the fruit arrives in excellent condition. The time occupied in shipment to Grimsby is short, and distribution soon follows its sale by the auctioneers.

The new Apples in cases are Spanish, and the new season's fruit is coming to hand in large quantities. Last week we received about 6,000 boxes, out of which 5,568 were unloaded at Liverpool, for distribution in the Midlands. Cherries are arriving from France, Germany, and Holland at the rate of from 5,000cwt to 10,000cwt a week. The foreign Cherry crop is, therefore, a heavy one. The Bananas are sent by Jamaica and Canary shippers, and the receipts are enormous. Last week, 31,650 bunches were consigned to Manchester from Jamaica, 28,426 to Liverpool from the Canaries, and 28,452 to London from the latter centre, with 170 from Madeira. These imports beat all previous records.

The Orange arrivals from Italy, Spain, and Jamaica have in the aggregate been heavy for the time of the year. The past week's imports exceeded 15,000 cases. Nearly all of this total came from Spain. The Tomato is now classed as a fruit, and from 25,000 to 30,000 boxes of them came in from Italy, Spain,

and the Canaries, the largest quantity being of Spanish growth. A few new Pears from Paris have arrived, but the supplies will be short for a week or two yet, though there are plenty to come.

The Pineapples have been raised in St. Michaels, a centre once famous for its Oranges, but now devoted to pinneries on a most extensive scale. It is not an easy matter to deal concisely with the foreign fruit import statistics because of the imperfect nature of the tabulations. For instance, last week, over 120,000 packages were entered as "unenumerated." This is sufficient to cast discredit upon the whole of the items furnished officially by the Customs House authorities.

The Belgian Grapes are more conspicuous this year than ever. We are receiving of them from three to four tons a week, the fruit being glass-house grown and put up in fancy baskets. In these notes reference is made to foreign fruit only, though, in addition to green Figs, Melons, and Tomatoes, we imported 25 tons of Grapes from the Channel Islands last week.

Cucumber Culture for Market.

Winter Treatment.

Cucumbers are now grown for market in such enormous quantities, during the summer season at any rate, that the price frequently falls to an unremunerative point. As the cold weather draws on the prices rise again, and though the demand is seldom very brisk during the late autumn, yet in the New Year and early spring, good prices are often obtained. The prices of twenty to thirty years ago, however, when "Cues" often made twenty to thirty shillings per dozen in the early part of the season, are never obtained now, and probably never will again. In these days, if a grower gets ten or twelve shillings a dozen for his earliest house of fruits, he thinks he is doing very well; and often it may only realise six or eight shillings a dozen.

A summer crop of "Cues" costs considerably less to grow than a winter one. This is not only due to the great difference in the amount of fuel required to maintain the necessary temperature, but in a considerable degree also to the equally greater productiveness of the plants themselves, summer grown plants possessing more vigour and strength than the most skilfully grown of those cultivated to fruit during the winter; and for one fruit cut from the latter, a grower can often cut four or six when the days are long and the solar heat abundant. It is useless to attempt to secure a crop of "Cues" in the winter unless there is a house at command in which a temperature of 60deg to 65deg can be steadily maintained. Even in the mildest weather, a gentle bottom heat is absolutely necessary, for the plants will not thrive on a cold bed.

Winter "Cues" cannot be profitably grown within a couple of miles of any large town, on account of the smoke. The soil must also be of a suitable character; "Cues" do not thrive to any extent, or for any length of time, in a very light soil, the best material being a fairly substantial loam of a moderately turfy description, preferably that which has been stacked up for some time, with about one-third of its bulk decayed manure. Some growers advise cuttings for winter work, but I prefer raising plants from seed, which should be sown the beginning of September; they will then be ready for planting the second week in October. From thence you should be cutting "Cues" by the New Year.

The plants should be put out 3ft apart; a crack of air should be given the first week or two after planting, if the weather is bright. When the plants are three-parts up the roof, the point should be taken out; the lateral growth should then be stopped at the third joint. Do not let the plants bear fruit on these shoots, but wait until the secondary growths from them show fruit, and then stop them, leaving one leaf beyond the young "Cues." Water very carefully. A nice, moist, growing atmosphere must be constantly maintained. Keep the glass clean, and take care not to overcrop the plants at any time.

Summer Treatment.

I will now deal with the summer treatment. Any of the first few weeks in the year, say from the 1st of January to the beginning of March, is as good a time as any to commence the culture of Cucumbers. When the plants are raised about this time they get the benefit of the constantly increasing daylight and sunshine, and with ordinary care and attention they consequently grow right on without a check of any kind. As a rule they make far more vigorous and productive plants than any that are grown during the autumn, and which have to undergo the ordeal of the short, dark, and sunless days of winter just at the time when they ought to be getting into a fully productive condition. The consequence is, that though "Cues" produced during the latter part of the spring and through the summer seldom if ever realise such high prices as the winter and early spring fruits, yet they are often more profitable in the end, owing to their much greater

productiveness, as well to the much smaller quantity of fuel required to produce them.

The best structure for "Cue" growing is a span-roofed house about 12ft wide, and from 6ft to 7ft high in the centre. Inside of this a 4½in brick wall should be built at each side, making the bed 2½ft wide. A row of hot water piping should run through the bottom of the bed—a flow if possible, with a valve, so that the heat can be turned on or off when required. The bed should then be filled up with littery manure, or, if procurable, tan, which suits the purpose admirably. On this bed the soil should be placed. The soil should not be broken up finely; the rougher the better, always using two-thirds loam, and one-third manure, with a good sprinkling of soot and bonemeal. I think bonemeal one of the best feeders for "Cues" you can get, but it must be given to them at the commencement, as it is a slow feeder, and there are other manures more active which can be applied later on.

The soil, after being well mixed, should be placed on the bed. Some growers put it in mounds; I always put it in a continuous ridge, which I believe to be better for the plants, and saves a good deal of labour. In this way "Cues" thrive capitally, as the gentle bottom heat ascending through the tan or littery manure keeps the roots in a healthy and active condition, and with plenty of heat and moisture above, and proper attention otherwise, the plants will succeed.

For raising the seed you want a nice light soil with a little leaf soil added. This should be made moist (but not wet), so that the seeds will not require any water until they have germinated. The seed should be sown in a box, three-parts filled with soil, then lay the seeds an inch apart. Put a good sprinkling of soil on, then plunge the box in a bed with a gentle bottom heat. About a week after the seeds have come up, they should be carefully potted into 3in-pots, and again plunged in the bed. When they have made three or four rough leaves they should be planted out into the bed. Plant them so that the seed leaves are just above the surface of the soil. A good distance for the plants is 3ft apart.

After the plants are established they will require a good deal of attention; in fact, you must not neglect them in any way, for if you do they will very soon tell tales.

A great mistake is often made in stopping, or pinching-out the points of the plants too soon. Of course, when grown in frames this must be done in order to get the two or three shoots necessary for each plant; but under house culture it is much better to let the plants grow two-thirds of the way up the rafters before taking out their points. After this is done they will shoot out from the axils of the lower leaves quite naturally. These shoots should be stopped at the second joint; in fact, from now on, all shoots should be stopped at the second joint and allowed to fruit. The plants grow much stronger at this time of the year, and are therefore well able to bear a crop of fruit on the first lateral. Directly the points of these lateral shoots are pinched out the fruits below will begin to swell, and will soon be in bloom. There is no necessity to fertilise the blooms of "Cues" unless seed is wanted. Once having flowered and set, the "Cues" swell very fast in a warm moist atmosphere, and by the time the fruit is ready to cut other young shoots will have pushed from each of the first, and these must be stopped, allowed to fruit, and then to produce another lot of growths again. However, do not allow these young shoots (which quickly multiply if left alone) to become too numerous, for if they get at all crowded they will also become weak, and are then unable to bear. Thin them out moderately from time to time, but avoid making a big clearance all at once. Little and often is the best rule.

All that are retained must be securely tied to the wires, using the best raffia. All shoots that are carrying fruit should be tied on each side to prevent the growth breaking away from the wires. When the plants are in full growth and bearing, liquid manure should be given them once a week. Almost anything will do, and the more the liquid is varied the better. Frequent top-dressings should be given, or so often as the roots work through on to the surface. This is most important, and for this a good heap of prepared soil should be kept on hand, and in cold weather it must be warmed by keeping it inside the house.

A mixture of fresh loam, decayed manure, with a sprinkling of soot and a good artificial fertiliser will answer well. Apply from 1in to 2in of this at a time. A good plan previous to top-dressing is to water with a weak solution of ammonia. This brings the roots to the top, when they can be well covered with the fresh compost, and the plants are greatly invigorated thereby. "Cues" enjoy a high temperature, and as a rule, the hotter the weather the better they thrive, provided only that they have moisture. At the same time, to have heat without moisture spells ruin, and care must be taken to keep the plants in a constantly moist condition above and below. All available surfaces must be damped down three or four times daily, according to the weather, allowing no part of the house to remain dry for any length of time. If this is done regularly the syringe will only require to be used occasionally.—(Read before the Cardiff Gardeners' Association on February 24 by Mr. WALLER, Cucumber grower to Messrs. Nurton and Co., Dynas Powis, Glamorgan.)

(To be continued)



Lilium speciosum.

The true Japanese *L. speciosum*—a slightly confused plant so far as naming is concerned—has fair-sized, roundish bulbs of a reddish tint, and stiff, wiry stems 1ft. to 3ft. high, clothed with lance-shaped leaves 4ft. to 6ft. long. The flowers are 3in. to 5in. across, and white, suffused with deep rose in the type, or pure white in *L. s. album*. The jagged surface growths are characteristic. Plants cultivated in the open air usually flower in August or early September, and bulbs grown cool, in pots or vases, form a welcome decorative feature for autumn use. *L. speciosum* is, of course, a great florist's or market man's flower, and large quantities are annually forced. Amongst the best varieties are *Kræterzeri*, white, with green centre to the segments; *roseum*, *macranthum*, *formosum*, *roseum superbum*; *Melpomene* (crimson purple), *cruentum*, *nanum* (soft rose), and *punctatum* (white spotted pink).

Eryngiums or Sea Hollies.

One may perhaps also be allowed to put in a plea (if such be needed) for the *Eryngiums*, whose distinct appearance gives a character to any garden. None are so fine in my eyes as the true *E. alpinum*, whose large leaves and wonderfully carved involucre are so pleasing. The involucre of steely blue looks as if made out of feathers or fashioned in the most skilful way out of some lace-work material afterwards starched and stiffened to keep the "creation" erect. Its flowers are thus perhaps the most elaborate of any of the hardy *Eryngiums*. Then there is the lovely *E. Oliverianum*, so finely tinged with blue on the stems as well as about its involucres. More finely coloured still is *E. Oliverianum superbum*; while we have the choice of others of beauty in *E. celestinum*, *E. planum*, the newer *E. Zabeli*, and others. The last named does not appeal to me so much as either *E. alpinum* or *E. Oliverianum*, the latter being often, by the way, supplied for *E. amethystinum*, which has small heads of flower. These all do well in light soil, like the native *E. maritimum*, the British Sea Holly. These are but some of our July flowers. Space forbids one's indulging in even a summary of the others in bloom. They are plentiful enough and beautiful enough for the highest praise.—S. ARNOTT.

Campanula persicifolia.

To descend from this glance of the regal Rose, even to a remark or two upon the Bellflowers, may to some seem truly a descent into Avernus, but it is not given to what is known as a "hardy plantsman" to tell of the Rose as she should be described, so that we must pass to her followers in the floral train. In stately spires there rise the flowers of the Peach-leaved Bellflower, one of the noblest of all our *Campanulas*, and one of the most attractive in its varied colours and forms. No one can say that it has not received due attention at the hands of our raisers; for have we not quite a number of forms of more or less superiority to the old *C. persicifolia* of our early days? It seems as if our old Double White, once such a general favourite, were destined to eclipse at the hands of the fine variety known as *Mørheimi*, but when well grown it is not easily surpassed with its symmetrical spike of perfectly formed flowers. To keep it in good condition—in fact, in some gardens, to keep it at all—it is necessary to propagate it by division almost annually. Then, since the introduction of the noble white variety, named *C. p. alba Backhousei* or *grandiflora*, we have had many large-flowered single forms in white and various shades of blue of almost perfect beauty, and of much effect in the garden. These are easily raised from seeds, and a careful selection from among the seedlings will result in a collection of forms of great beauty. Some have single flowers, some semi-double, others have the calyx and corolla coloured alike in blue and white; while some have long and some short-belled blooms. In any almost of its varieties the Peach-leaved Bellflower is one of the best of our summer garden flowers. Its beauty will be my excuse for speaking of it again at this time.—S. F.

About the Elm.

It is somewhat difficult to trace the origin of the Elm, but at any rate it is known to exist in North Africa, Siberia, and North and South Europe. There is no doubt, a contemporary remarks, that the Elm has been a common tree in England from very ancient times from the fact noted by Evelyn that in the Domesday Book, which dates from 1068, there are more than forty places bearing the name of this tree, such as Elmhurst, Elmham, and others. Cambridgeshire and Oxfordshire each possess a village named Elm. Elm timber is remarkable for its durability under the action of water, and is therefore in great request for piles to keep up the banks of rivers, and for drainage purposes. The roughness and rigidity of the wood also makes it specially suitable for wheelwrights, who use it in large quantities.

Viburnum Sieboldianum.

Among valuable shrubs not nearly as well known as they should be, is the *Viburnum Sieboldianum*. In nursery lists it is classed as a shrub; but though usually seen in shrub form, it becomes a small tree under the care of those who desire to have it in that shape. It has very large, rough leaves, of a deep green colour, and because of keeping its foliage green until frosts take it off, it suggests an almost evergreen character. Aside from anything else to recommend it, its vigorous growth and large green leaves, so unlike those of any other shrub, would be good claims to a place on a lawn. In early spring, as soon as a little growth is made, its flowers are produced in large, flat corymbs, white in colour. These flat heads are not unlike those of the *Laurustinus*. Attractive as is its appearance at that time, I think it surpasses it at this season of the year, when its clusters of berries are ripe. These are of a salmon red colour, and with the setting of dark green leaves which they have the effect is very fine. Where birds are numerous the berries disappear soon after they ripen, proving an enticing fruit to them, as so many other berries do.

Clematis recta.

Not many of us, I think, speak with so little regard for white flowers as a keen lover of plants, formerly M.P. for one of the Scottish counties. He was wont to say of a flower: "It is pretty, but it's a pity that it is white." Most of us will disagree with him in so despising the flowers which are the emblems of purity. They are plentiful, yet never too plentiful in our gardens, and among those which are not sufficiently grown for summer bloom we may include the pretty *Clematis recta*, or *erecta*, as it is more commonly called. No one need suppose that it resembles the popular climbing *Clematis* in its noblest forms, for it is not a climber, but an erect growing herbaceous plant, growing 4ft. or so in height, and bearing clouds of erect small white flowers in almost endless profusion. It is variable, and several varieties are recognised by some botanists. One of the scarcest of these is the double one, *C. recta fl.-pl.*, but the typical one and seedlings raised from it are beautiful enough when grown in a sunny place to give every satisfaction. The plants vary a little, some having broader segments in the flowers than others. It is easily grown from seeds, and it may also be increased by division.—K. D.

Chrysanthemum leucanthemum semi-duplex.

We have hardy *Marguerites* galore, and between Shasta Daisies, Elaines, Duchesses, and other *Chrysanthemums* with titles of less or no nobility those who wish to choose from these useful summer flowers are bewildered indeed. Yet one is sure that they need not regret selecting as one to cultivate the pretty *Marguerite* known by the uncouth name of *Chrysanthemum leucanthemum semi-duplex*. Last year I came across a garden in which its flowers were being saved for use in a wedding bouquet. I did not see the result, but the fact was enough to tell of the estimation in which this hardy flower was held by one who had a good command of other blossoms from the greenhouse, stove, and open garden. It is lighter and more elegant in every way than even the lightest of the fine varieties of *C. maximum* with fringed margins now so popular in gardens. The ray petals are pure white, the disc is a delicate greenish yellow, and immediately round it are small narrow petals like a lovely fringe. It is not a strong grower like the maximum group, but from a low-growing tuft of leaves the flowers rise on long stalks, which render it all the more useful for cutting purposes. It is not by any means a new flower.—S. A.



Lilium speciosum varieties. (See page 104.)

Societies.

R.H.S., Scientific Committee, July 21st.

Present: Dr. M. T. Masters, F.R.S. (in the chair); Messrs. Odell, Hudson, Massee, Saunders; Dr. M. C. Cooke, Prof. Boulger; Rev. G. Henslow, Hon. Sec.; and Mr. Hunt, visitor from New Zealand.

Verbascum leaves diseased.—Dr. Cooke pronounced the fungus to be *Oidium Balsami*. It also attacks Turnips and Strawberries. Powdered sulphur is the only remedy.

Gooseberry disease.—Dr. Cooke reported on samples sent from Cornwall as being attacked by *Microsphaera Grossulariae*. Powdered sulphur is the only treatment.

Mammillaria with Dodder.—Prof. Boulger reported that a specimen of *M. Potosina* was attacked by some species of *Cuscuta*. It might have been imported, as hedgerow *Caeti* about Monte Video are commonly covered with Dodder.

Pollination in orchards.—Mr. Chittenden, of the County Laboratories, Chelmsford, sent the results of experiments in pollinating Pears and Apples. Of eleven varieties of Pears artificially pollinated (March 3), the flowers being protected by Manila paper bags, Conference and Durondau set fruit abundantly; *Bellissime d'Hiver* and Pitmaston set one out of eighteen and twelve flowers respectively, neither having set fruit last year. Of twenty-three varieties of Apples, Gladstone and Stirling Castle were self-fertile, as they also were in 1902. Lord Derby and Schoolmaster, which did not set fruit last year, gave positive results. Of the eleven tried for the first time this year, only King of the Pippins set fruit.

Carnations failing.—Mr. Douglas reported on plants sent from Wetherby by Mrs. Duncome "growing in a dry soil." "There was no disease, but the same result ensues from too much or too little water. It occurs when the pot plants have been neglected and a rush of water will then kill the roots. Degenerated plants may be too weak to produce flowers and get into the state similar to those sent. Mortar rubbish, bone-dust, or ground-up oystershells will supply vigour to Carnations."

Papaver dubium, semi-double.—Mr. Wilks showed a small plant, about 5 ins. in height, with petaloid stamens. The "doubling" was thus probably due to starvation, a not infrequent cause.

Conference of New Zealand.—Mr. Hunt gave some account of the Conference of New Zealand upon fruit growing and horticulture; and a discussion followed upon plants of New Zealand useful for culture in England, in which Canon Ellacombe, Dr. Masters, and others joined.

National Carnation and Picotee, July 21st.

The whole of the report of the exhibition held on the 21st inst. in Westminster could not be published last week, and the remainder here follows.

THIRD DIVISION.

Six Fancies brought out fifteen sets, and some most magnificent flowers were shown. Mr. Cartwright was again ahead with perfect flowers; Mr. Fairlie was somewhat behind as second; third, Mr. W. H. Parton, with a good set. In class 28 for six white-ground Picotees, eleven entered, and Mr. W. E. Wilson, with sweet flowers, was foremost; second, Mr. J. J. Keen. For six yellow-grounds there were thirteen present, and the place of honour fell to Mr. E. H. Buckland, Southgate House, Winchester, with good flowers, but overdressed; second, Mr. Cartwright; and third, Mr. C. A. Philbrick. For three selfs, Mr. Charrington beat Mr. Cartwright out of sixteen lots.

UNDRESSED BLOOMS. BIZARRES AND FLAKES.—Mr. E. J. Wootten, of Winchester, was first for six (class 35); Mr. Charrington, second; and H. S. Bartlett, third. Mr. Wootten led for six selfs, with beautiful flowers; Mr. M. V. Charrington, second; and Mrs. E. Beck, third; there being six entries. Six Fancies: Mr. E. Wootten was first; M. V. Charrington, second; and H. S. Bartlett, third, out of seven.

PICOTEES.—Mr. Wootten led for six white-ground Picotees; Mr. H. S. Bartlett, second; and Mr. M. V. Charrington, third. For the six yellow-grounds, Mr. Wootten again had the best; M. V. Charrington, second; and Mrs. E. Beck, third. For six selfs, Fancies, or yellow-grounds, Mr. E. Wootten was foremost; M. V. Charrington, second; and H. S. Bartlett, third.

SINGLE SPECIMENS.—M. V. Charrington first, with Hildegard; Mrs. E. Beck second, with Cecilia; and Mr. Wootten third, with Frogan. In the novices' class, Mr. J. Parsons was first; Herbert W. Dunlop, second; and Mrs. H. Brodie, Enfield, a really good third.

Cardiff, July 22nd and 23rd.

Success was again largely written over the fifteenth annual show of the Cardiff and County Horticultural Society held in the Sophia Gardens at Cardiff on the 22nd and 23rd. "A fine show" was the opinion freely expressed on all hands. The schedule this year was enlarged by 100 additional classes, and the entries received fully justified this progressive policy of the committee. Public interest in the show was deepened by the visit of a deputation from the Council of the Royal Horticultural Society, which

consisted of the following gentlemen: Mr. F. C. Lloyd, High Sheriff of Buckinghamshire; Mr. Wigan, son of Sir Frederick Wigan; Rev. W. Wilks, Mr. Veitch, and Mr. Wright. Owing to the trying season, it was generally thought that the quality would be below the usual standard seen at Cardiff, but such was not the case, except in the classes for Roses, Sweet Peas, and outdoor fruits. Exhibitors were put to no little inconvenience through the rain falling in torrents the night preceding and the morning of the show. Happily the weather cleared up during the forenoon, thus relieving the minds of the officials, and ensuring a good attendance of the public, for the flower show is one of the events of the season in Cardiff. The competition was exceptionally keen in all classes except Roses, and no competitor had the proverbial "walk over."

In division A, class 1, open to all, for two stove or greenhouse plants in bloom, and two fine-foliaged or variegated plants or Ferns, James Cypher and Son, of Cheltenham, were placed first with fine specimens of *Ixora salicifolia*, *Statice profusa*, *Croton Chelsoni*, and *Kentia Fosteriana*; W. J. Buckley, Llanelli, being second. For three stove or greenhouse Ferns there were five entries. Mr. Howells, Cardiff, won first prize, in his trio was a splendid specimen of *Asplenium nidus-avis*; Mr. H. R. Farmer, gardener to the Marquis of Bute, came in second. In this lot was a beautiful specimen of *Acrostichum aureum*. For a group of plants to cover a space of 150 square feet, Messrs. James Cypher and Son were again first; Mr. Buckley being second. The two groups were much admired for the exceedingly light arrangement of both. Mr. Neale, Penarth (gardener, J. Davey), won first prize for three Orchids, his *Epidendrum prismatocarpum* being conspicuous with its lengthy spikes.

In no department of the show were the disastrous effects of the weather more apparent than in the classes for Roses. For twelve distinct kinds, three blooms of each, King's Acre Nurseries, Hereford, won first prize, the best blooms in this stand were Horace Vernet, Captain Hayward, Louise Van Houtte, and Marie Baumann; Mr. J. Crossling, Penarth Nurseries, being a close second. King's Acre Nurseries were again first for twenty-four distinct, staging good blooms of Prince Arthur, Victor Hugo, and Gustave Piganeau. The same firm had the only lot for eighteen Teas or Noisettes, and were awarded first prize, showing amongst others good fresh blooms of The Bride, Bridesmaid, and Rubens. For twelve of any one variety except Teas or Noisettes the Hereford firm staged A. K. Williams; for twelve Teas, one variety, The Bride, being placed first in both classes.

In class 10, for a collection of Roses to occupy a space 6ft. by 3ft., to be shown with their foliage and buds, first prize for which is £3 and R.H.S. silver medal, J. Crossling won first prize. This is the third time in succession that the medal has been won by the Penarth Nursery. In this fine collection Gustave Regis, Victor Hugo, and Mrs. W. J. Grant were shown in good form. S. Treseder, Pwllcock Nurseries, Cardiff, came in second with another fine lot.

For six Carnations and six Picotees there were five entries, first prize being won by W. Tupplin and Son, Newton Abbot; second prize by Mrs. Brooks Smith, Orlig House. When is this crude style of staging the Carnation with white paper collarettes on flat boards to be abolished from our shows? It was a relief to turn to the next class, collection of Carnations and Picotees shown with their own foliage and buds, not dressed in any way, and without ties or bands around calyx or paper collars, space 6ft. by 3ft. A. P. Pike, Llanishen, won first prize with a beautiful lot; W. Treseder second, and Messrs. Blackmore and Langdon third.

Nearly the whole of a large tent was devoted to Sweet Peas, there being numerous entries in each class. For eighteen vases, distinct varieties, Messrs. Jarman and Co., Chard, won first prize, closely followed by Mr. J. Jones, gardener to Sir Thomas Morel, Penarth. For six vases, distinct, Mr. H. Harris, gardener to Mrs. Jenner, Wenvoe Castle, was first; second, J. Jones. Four twelve vases, distinct, the produce of seeds supplied by Mr. R. Sydenham, and for which a large silver medal was awarded with first prize, a smaller with the second, Mr. Harris was again first. This enthusiastic Sweet Pea grower has been hard hit by the weather; though good, his blooms lacked the size and colour of his exhibits at previous shows.

For twelve vases, the prizes for which are given by Henry Eckford, Wem, Mr. Adey, Penarth, staged the first prize lot. This amateur grower had the cleanest and freshest blooms in the show. The varieties, which are fairly representative of those staged in the other classes, were Black Knight, Hon. Mrs. E. Kenyon, Jeannie Gordon, Mars, Sadie Burpee, Emily Eckford, Miss Willmott, Countess of Cadogan, Prima Donna, Lady Grisell Hamilton, Dorothy Eckford, and Hon. F. Bouverie. Mr. Harris was second.

Much interest is taken in the decorative department, especially in the class for a dinner table laid for dessert for eight persons. Miss Ellis won first prize with a light arrangement of pale yellow *Aquilegias* and *Gypsophila elegans*. Miss Crouch was second with a table in which Iceland Poppies were largely used, but were rather overdone. Mrs. Harris was third. The bouquets were below the average seen at Cardiff shows. W. Treseder,

Cardiff, won the silver medal for the highest aggregate in these classes.

In the fruit tent an object of much interest was an arch composed of two pot Vines carrying large, fine bunches of well finished berries, the varieties being Black Hamburgh and Madresfield Court. This was exhibited by Mr. H. R. Farmer, gardener to the Marquis of Bute. The mantle of Mr. Pettigrew has evidently fallen on the shoulders of his young successor, for Mr. Farmer is undoubtedly upholding the reputation of the Castle Gardens for pot Vines, indoor fruit, and stove plants. Alongside the arch were eight handsome fruits averaging 5lb. to 6lb. each of the fine new Melon, The Duchess, raised by the late Mr. A. Pettigrew. This Melon, a white fleshed one, and finely netted, has everything to recommend it, the constitution being all that can be desired.

For two bunches any black Grape, Mr. T. G. Cartwright was first with two good bunches of Madresfield Court; Sir A. Henderson second with Black Hamburgh. For one bunch, black, Mr. Cartwright was again first; Sir A. Henderson second with Gros Maroc. For one white fleshed Melon, Mr. H. R. Farmer was first with a fine fruit of The Duchess; Mrs. J. Buckley with green flesh, and Sir A. Henderson for scarlet flesh, the latter being a fine fruit of Sutton's Scarlet Queen. Mr. W. L. Bastin was first for a collection of fruit made up of Black Hamburgh Grapes, Best of All Melon, Latest of All Strawberries, Pineapple Nectarines, Brown Turkey Figs, and Royal George Peaches. For a dish of Peaches, Mr. Farmer was first with fine fruits of Princess of Wales. For a dish of fifty fruits of Strawberries, Mr. Harris was easily first with a very fine lot of Waterloo.

Nowhere in the show was the competition keener than in the vegetable classes. For the collection of nine varieties, Mr. E. Beckett, gardener to Lord Aldenham, Elstree, was first with perfect samples, well staged made up as follows: New Red Intermediate Carrot, Early Giant Cauliflower, Giant Blood Red Rocca Onion, Pen-y-byd Marrow, Duke of Albany Pea, Snowdrop Potato, Perfection Tomato, Canadian Wonder Bean, and Globe Artichokes. Mr. W. L. Bastin was second. For Sutton's prizes for six varieties the order was reversed, W. L. Bastin being first, E. Beckett second. Mr. Bastin's was a specially fine lot, viz., White Leviathan Onion, Duke of Albany Pea, Perfection Tomato, Magnum Bonum Cauliflower, Favourite Carrot, and Favourite Potato.

In the affiliated societies' competition for the best collection of cut flowers grown in the open, and the best collection of vegetables, the prize for which is a handsome challenge silver bowl, and three guineas in cash, Margam was placed first, the flowers being good, and the vegetables of the highest quality. Llanishen and district were a close second; St. Fagans and district third. The latter had by far the finer collection of flowers, but were very weak in vegetables. In the cottagers' classes the same fierce competition prevailed, vegetables being shown in fine condition.

In connection with the show, the Glamorgan Bee-keepers' Association had a tent well filled with competitions for various kinds of honey, wax, and bee-keeping appliances, while lectures and practical demonstrations of bee driving were given at intervals.

Non-competitive exhibits added greatly to the show. The Marquis of Bute put up a handsome group of stove and greenhouse plants, covering a space of 450 square feet, the stove plants in this massive group being very highly coloured. Mr. James Watson staged a unique group of Cacti; Mr. H. Pettigrew, gardener to Lord Windsor, had a pretty collection of annuals. Messrs. Blackmore and Langdon's exhibit of Begonia blooms was a very bright one, some of the best varieties being R. J. Chamberlain, crimson; Marchioness of Bath, white; Captain Henderson, scarlet; Lady Willmott, red; Mrs. Heathcote, yellow; and Avalanche, white. Messrs. B. R. Davis and Son had a similar exhibit. Mr. John Russell covered 150 sq. feet with ornamental shrubs. Messrs. Hill and Son, Barrowfield Nurseries, delighted Fern lovers with a collection occupying 400 square feet. Kalanchoe flammea stood out prominently in Messrs. Clibran's group. A certificate was awarded to a new Campanula, Hillside Blue, staged by W. J. Stokes and Son. This will be a welcome addition to the herbaceous border. The Ranelagh Nurseries had a pretty group of Asparagus myriocladus.

The numerous awards made by the deputation of the R.H.S. are an index of the high quality seen throughout the show, they are as follows:—

Gold medal to Marquis of Bute (H. Farmer, gardener) for group of stove and greenhouse plants; to Mr. James Watson, Cardiff, for general collection of Cacti; and to Messrs. Hill and Son, Barrowfield Nursery, London, for general collection of Ferns.

Silver-gilt Flora medal to Messrs. Blackmore and Langdon, Bath, for Begonias; to Messrs. J. Cypher and Son, Cheltenham, for group of plants for effect.

Silver Flora medal to Mr. J. Buckley, for group of plants for effect; to Messrs. John Russell and Son, for group of ornamental shrubs; to Mr. W. Treseder, Cardiff, for collection of herbaceous flowers; to the King's Acre Nursery Co., Hereford, for Roses; and to Messrs. B. R. Davis and Sons for Begonias.

Silver Knightian medal to the Marquis of Bute (gardener, H.

Farmer), for Grapes in pot; to Lord Aldenham (gardener, E. Beckett), for vegetables; to Sir A. Henderson, Bart. (gardener, W. Bastin), for vegetables.

Silver Banksian medal to Mr. James Howell (gardener, A. Brown), for Ferns; to Messrs. Crossling and Sons, Penarth, for Roses; to Messrs. Barr and Sons, for hardy flowers; to Mr. Prichard, for hardy flowers; and to Messrs. John Waterer and Sons, for trees and shrubs.

Bronze Flora medal to Messrs. Stokes and Son, for hardy flowers.

Bronze Banksian medal to Sir Thomas Morel, for Sweet Peas; to Messrs. Jarman and Co., for Sweet Peas; to Mr. W. J. Mellings, for six flowering plants; to Mr. J. E. Deacon, for vegetables; to Mr. F. Mears, for vegetables.

Special commendation to Mr. A. Redwood, for vegetables; to Mrs. E. Tiplin, for wild flowers; to Mr. W. J. Mellings, for Pelargoniums; to Mr. C. Howe, for a Pelargonium; to Mrs. Jenner, for Sweet Peas; to Mr. F. Adey, for Sweet Peas; to Mr. J. Nash Leigh, for Begonias; to Mr. A. W. Morris, for bowl of Roses; to Mr. W. Treseder, for bouquet.

The luncheon which followed the opening of the show was presided over by Dr. De Vere Hunt, the genial chairman of the committee. Replying to the toast of the R.H.S., Mr. F. C. Lloyd expressed thanks for the cordial reception and kindness shown to them at Cardiff, and spoke in high terms of the quality of the exhibits in the show. The Rev. W. Wilks, in response to a general request from the tables, also replied. He spoke of the present flourishing condition of the R.H.S., and urged exhibitors to practise the art of staging well; flowers, if possible, should be staged with their own foliage. (Applause). He would carry back to London a cordial report of the kindness met with in Cardiff, and hoped that at no distant date the invitation would be repeated. Mr. Pearson, in replying to the toast of the judges, urged that correct naming of exhibits should be insisted on. Shows lost much of their educational value through carelessness in this respect. Mr. Gillett, the energetic secretary, well deserved the high compliments paid to him, ably assisted as he is by his son Harry, and every credit is due to the committee who have worked so hard for the success of the show.

Newcastle, July 22nd, 23rd, and 24th.

The above exhibition is the oldest in England, and was established in 1824, and perhaps there are few exhibitions which have had so many vicissitudes of fortune as the above show. What with weather and wind, the capricious elements have been hard to contend with; but it has ever had business men at its head of indomitable spirit and gigantic will, which is characteristic of the hardy Novocastrian, who does not recognise the word defeat in his vocabulary. The society is most interested in developing a taste for horticulture in the northern counties, and the present show is beyond doubt one of the best the society has ever had. Many of the chief prizetakers of stove and greenhouse plants were miners, and the cottagers' exhibitions of every class were most meritorious. It is to be hoped this augurs well for the future prosperity of the society. There were several new departures this year in the society's arrangements which were pleasant departures. The exhibits were placed in three large marquees all joined together, so that they were easily accessible to the visitor. The local nurserymen, as well as many of the most prominent of that class in England, were a very great help to the show, and it is a pity perhaps the society or judges did not see their way to award more than one silver medal amongst so many grand collections, as highly, or very highly commended, is not a very satisfactory commendation for nurserymen who have travelled so far and at so much expense, and made the show the success it was. It is worthy of note this year there were many new exhibitors, and the success they achieved it is hoped will be an inducement to them to help the show in future.

For a group of miscellaneous plants, 10ft by 20ft, the society offered £23 and the R.H.S. Silver Banksian Medal. Mr. T. Pattinson, Tunstall Manor, West Hartlepool, was a good first, his arrangement most graceful, and a grand effect obtained; there was sufficient of colour to blend without excess. Crotons, Palms, Begonias, and Verbenas (these were really excellent), Orchids, Gloxinias, and a fine plant of Acalypha Sanderiana were used, dotted over in little hillocks, and the effect was chaste and excellent. The second, Mr. H. Hillier, Darlington, showed also an excellent group which contained many choice Orchids. Mr. F. Edmondson, Newcastle, was third with a group which showed many good points of excellent arrangement, showing every plant to its own advantage. Mr. T. Wilkinson, Newcastle, was fourth, but his group was too flat.

For six plants in bloom, distinct varieties. Mr. J. Ellison, Cramlington, was first, and Mr. S. Bewick, Seatou Delaval, second. As both these gentlemen were miners, their exhibits were much admired and eagerly examined. The former had *Rondeletia speciosa*, *Clerodendron Balfouri*, *Dipladenia amabilis*, *Allamanda Wardleana*, *Stephanotis floribunda*, *Statice profusa*, all fresh and good. The second lot contained *Dipladenia alba* (fine), *Ixora Williamsi*, *Clerodendron Balfouri*. In the open class Orchids were exhibited by Mr. S. Callaghau, who was first with good plants of *Cattleya Mossiae*

(eight blooms), *Lycaste Deppei*, and *Oncidium crispum*. *Gloxinias*, *Dracænas*, and *Crotons* were also shown well. Single and double *Begonias* were excellent; the first prizetaker, Mr. J. Hunter, Hexham, who is a schoolmaster, and an amateur all round that promises a future brilliant career. Table plants were an even, finely balanced lot. Mr. H. Hillier received premier award.

CUT FLOWERS.—These classes are always interesting to north country men. For thirty-six Roses, twelve varieties, Mr. Hugh Dickson, Belfast, was first. He had an inimitable lot for freshness, size, colour, substance, and possessing every point that the most fastidious rosarian could desire; they were the admiration of visitors, and the following were beautifully staged:—Mrs. J. Laing, Capt. Hayward, Ulrich Brunner, J. Stuart Mill, Etienne Levet, Marie Cochet, Her Majesty, Susanne Marie Rodocanachi. R. Harkness and Co., Hitchin, second. For forty-eight Roses, distinct varieties, twenty-four, twelve, and twelve any sort, and twelve any varieties of Tea Roses, Mr. Dickson was first, with Messrs. Harkness second, except for twelve any variety of Tea Roses, when Mr. R. Park, Bedale, was second.

The herbaceous flowers are always an interesting exhibition at this show, and this year they were a credit to the exhibitors. Mr. F. Edmondson, florist, Newcastle, was first for twenty-four bunches with large bunches of *Delphinium Pysche*, *Scabiosa lutea*, *Aconitum Napellus bicolor*, *Campanula alba*, *Acanthus longifolius*, *Iris English* and Spanish, *Polemonium Richardsoni*, *Pyrethrum Vivid*, *Lilium auratum*, *Gladiolus The Bride*, *Campanula persicifolia*, *Alströméria aurea*, *Centranthus ruber*, *Gladiolus Crimson Queen*, *Erigeron amethystina*. Mr. Edmondson is an old exhibitor at Newcastle, and his success was much appreciated. Messrs. Harkness were second, also with an excellent lot, and for eighteen bunches, Roses excluded, the latter firm was first. Messrs. G. Gibson and Co., Bedale, were second. These flowers caused much attraction, and were certainly one of the salient features of the exhibition. Show and Fancy Pansies were well represented for the season, as there are many keen growers around Newcastle. Carnations were grand. Messrs. Thompson and Sons, Hexham, were first with Hector McDonald as a special flower and well grown.

TABLE DECORATIONS.—These occupied the greater portion of one of the tents, and were, as usual, of a very high-class character, and would have been very difficult to beat. For a vase or epergne for drawing-room, Mr. M. Purvis, Benton, was first with a faultless arrangement of Orchids, Lilies, Roses, Lily of the Valley, all of which were effectively draped with *Adiantum* Ferns, *Asparagus*, and the effect was charming. For a vase for drawing-room, Orchids excluded, Mr. F. Edmondson was first with good flowers proportionately balanced in colour, and each one showing itself without crowding. For a basket of cut flowers, not to exceed 12 in., and for a basket, Orchids excluded, and a basket of Roses, bridal bouquet, hand bouquet, and three sprays for ladies, Messrs. Perkins of Coventry were first in each class. They were all in this well known firm's usual style of good taste, and showing a valuable lesson how flowers can be made effective without using too many of them, by exercising taste and good judgment. The bridal bouquet was a marvellous work of art; *Odontoglossum Alexandræ*, white Roses, Lily of the Valley, and other Lilies were beautifully mingled together, and uniquely draped with *Asparagus*. In these classes the competition was very keen, Messrs. W. J. Battensby, Blaydon, and F. Edmondson exhibiting splendidly, and it must have given the judges some trouble to come to a decision. For a fireplace decoration Miss Edmondson, Newcastle, was first. This class of decoration is becoming very fashionable, and is well worthy of encouragement.

FRUIT.—We have seen much better displays of fruit. Many of the Grapes were not ripe, especially the Muscats, but still some excellent examples were staged. For eight dishes of fruit, distinct kinds, Mr. J. C. McPherson, gardener to the Earl of Lonsborough, was first with good bunches of Muscat of Alexandria and Black Hamburg, nicely finished; Nectarine Early Rivers, Bellegarde Peaches, Brown Turkey Figs, Royal Sovereign Melon, Queen Pine, and Sir J. Paxton Strawberries. This was an even, nice collection. Mr. J. McIndoe, Hutton Hall, was second with Gros Guillaume Grapes and Black Hamburg, 5 to 6 lb each, and a Best of All Melon. Mr. Wm. Nicholls, gardener to Lady Beaumont, was third, and Mr. E. Combey, gardener to the Earl of Durham, fourth. For four dishes of fruit, including Muscat of Alexandria Grapes, Black Hamburg, Princess of Wales Peaches, and Melon, Mr. E. Combey was first. There were three competitors in this class. For four bunches of Grapes, not less than two varieties, Mr. Wm. Nicholls was first with good bunches of Buckland Sweetwater (very fine) and Black Hamburg. For two bunches of White Muscat, Mr. E. Combey; and for two bunches of white Grapes, any other variety, Mr. J. McIndoe, with Duke of Buccleuch, and the berries very large; and for two bunches of Black Hamburg, and two bunches any variety of black, Mr. J. McIndoe was first, and Mr. Nicholls second with Madresfield Court. For a dish of Peaches, Mr. J. C. McPherson was first with Grosse Mignonne, ripe and finely coloured, and for Nectarines Mr. Nicholls was placed in the same position with Lord Napier. Tomatoes, Strawberries, and Melons were also excellent.

In the division open to all except nurserymen, Mr. J. Hunter was first for four plants, well flowered, including *Clerodendron fallax* and *Balfouri*, *Stephanotis floribunda*, and *Allamanda Wardleana*. Roses, Pansies, Sweet Peas were all good, and herbaceous plants were

excellent, the latter being won by Mr. Wm. —, Kirby Moor side. Some excellent vegetables were also shown, Mr. W. Hodgson Prudhoe, Mr. Wm. Nichols, and Mr. J. C. McPherson being the principal winners. The Royal Horticultural Society's Silver Flora Medal was awarded to Messrs. Perkins, Coventry, for table decorations, and the Royal Horticultural Banksian Medal was won by Mr. Thos. Pattison for his group of plants.

Nurserymen's exhibits not for competition were Messrs. Wm. Fell and Co., Hexham, who showed a splendid group of miscellaneous plants occupying the whole of end of the tent, including choice *Coniferae*, with Palms, Ferns, Hydrangeas, and both gold and silver varieties of the *Acer Negundo*; also the Loganberry, which the firm claim to have first introduced into the North. A Certificate of Merit and a special Silver Medal were awarded to this firm. Having watched their exhibits for nearly a quarter of a century, we must say this was the best group they ever staged at any show.

Messrs. Backhouse and Son, York, exhibited rock and alpine plants as a miniature rock garden, and they were scarcely ever allowed to remain without admiring visitors. They showed also a new *Cupressus argentea alba*. Plants, amongst the rock and alpine, conspicuous were *Silene acaulis* fl.-pl. (new), *Lithospermum tinctorum*, *Sarracenia purpurea*, *Darlingtonia californica*, *Podophyllum Emodi*, *Edrassanthus dalmaticus*, *Ramondia pyrenaica*, *Sempervivum atropurpureum*, *Coronilla minima*, *Saxifraga longifolia*, *Potentilla nivalis*, *Hypericum nummularium*. These were the first time here, and the pleasure to visitors was intense. Another interesting exhibit was the hybrid Water Lilies from Mr. A. M. R. Perry, Winchmore Hill, London. These curious plants drew forth much admiration, and were the constant theme of wonder and curiosity to the largest number that perhaps ever visited the above exhibition. The *Nymphæas* included such beautiful varieties as *Andreani*, *Arc-en-ciel*, a new white and salmon variety; *Brakely*, rose; *Frœbelli*, an intense deep crimson with orange stamens, and the different variety *Leydekeri*, including rose; and *filifera*, of a delicate pink or rose colour.

Mr. J. Douglas exhibited Carnations (grand); Mr. J. Thompson, Forest Hill, Newcastle, a miscellaneous collection, including a new *Lobelia* he has raised; Mr. J. J. Barrow, gardener to N. F. Henderson, Esq., Melons; Mr. J. Forbes, Howick, Pentstemons, Verbenas, and Phloxes; Messrs. Laing and Mathier, Kelso, Messrs. Mack and Milne, Darlington, and Messrs. Dixon, Ltd., Newcastle, Roses; Messrs. J. W. Barber, Newcastle, cut flowers; Messrs. Kent and Brydau, Carnations; and Messrs. Wm. Cutbush and Son, London, Carnations.

From the above it will be seen how the nurserymen assisted the show.

Messrs. Harriman and Co., Newcastle, had on view vases and fountains; Messrs. W. E. Foggin and Co., Newcastle, wirework; Messrs. Henry Walker and Son and Messrs. J. and H. Harrison, Ltd., both of Newcastle, garden seats.

The staging committee and the executive are to be congratulated on their efforts to make such a splendid treat for the horticultural public, and the secretary, Mr. J. B. Reid, was indefatigable in assisting them. The president, Mr. R. E. Lambton, gave a splendid luncheon in a marquee on the grounds, and was supported by the Mayor, Alderman Sir Wm. Stephenson; chairman, Councillor J. Beattie; vice-chairman, Mr. Pickering; hon. treasurer, John Armorer Batey.—BERNARD COWAN, F.R.H.S.

Brentwood, July 23rd.

The annual exhibition of this long established society took place in the grounds of Middleton Hall, Brentwood, on July 23, several tents being required to take the exhibits. The Roses were remarkably good, as Brentwood is so near the Rose growing centre. There were very fine specimen Ferns and good examples of ornamental foliaged plants. Fruit and vegetables were highly creditable, and the productions from cottagers were very numerous. A very heavy storm passed over the show ground about noon which completely flooded the tents for a time. Afterwards the weather cleared, and remained fine for the remainder of the day.

In the way of plants groups arranged for effect were a leading feature. The first prize consisting of a silver cup, offered by Miss Willmott, was won by her gardener (Mr. Preece) with an arrangement of a very effective character, and Mr. Preece generously gave the cup back to the society to be offered again next year. Mr. Holloway, gardener to G. H. Baxter, Esq., Hutton Park, was placed second. There was a class also for a smaller group, in which some nice arrangements were staged. A very fine feature in the plant classes was the six exotic Ferns which gained the first prize (Mr. Preece). They consisted of finely developed specimens of *Marattia elegans*, *Microlepia davallioides furcans*, the golden *Gymnogramma Alstoni*, and the silvery *G. Wettenhalliana fijiensis*, and *Adiantum fragrantissimum*. Mr. Holloway came second with a magnificent specimen of *Davallia fijiensis elegans*, fully 6 ft through, a fine piece of the Bird's-nest Fern, &c. Ornamental plants in sizes were also well shown. Fuchsias, Coleus, Gloxinias, Tuberos Begonias, *Streptocarpus*, table plants, &c., were also shown.

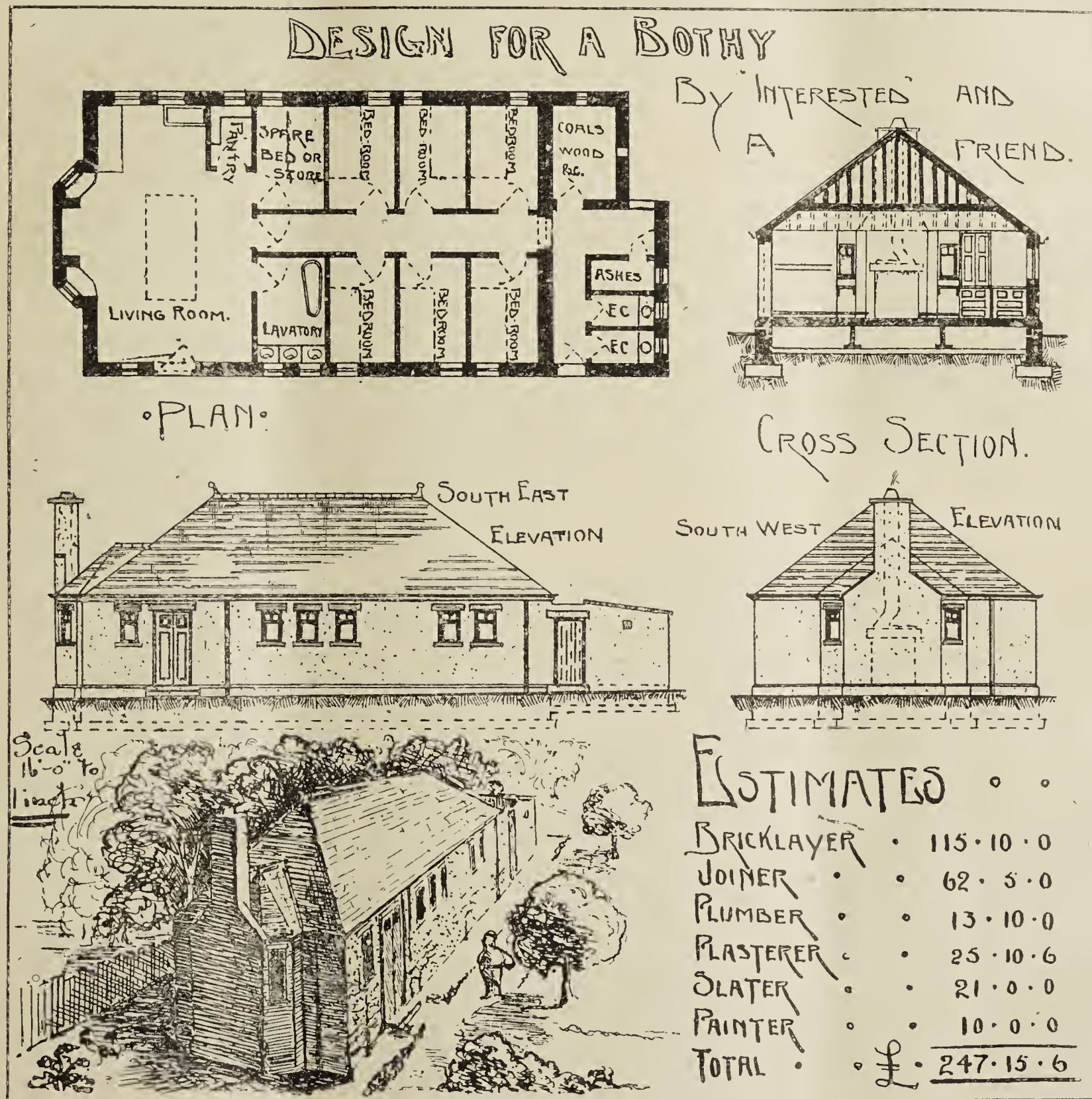
Cut flowers included hardy herbaceous plants, among which some good things were staged; also hardy annuals, Sweet Peas,

both numerously and well shown, Pelargoniums, Violas, &c. Table decorations made a pretty feature; there were three classes for dinner tables, one in which any flowers could be employed, one for Sweet Peas also, in which some very tasteful tables were set up; and also for wild flowers. The competition was very good among local residents for the prizes. There were also epergnes of Sweet Peas. Cut flowers were also shown by amateurs and cottagers.

A charming Rose show held under the rules of the National Rose Society was a part of the Brentwood display, and some very fine Roses were staged. Messrs. R. Harkness and Co., Rose growers, Hitchin, came first with twenty-four varieties. Some

Two Brentwood and district challenge cups are annually offered for Roses, one in the open division, the other for amateurs. Fate was against both the holders from last year, Messrs. D. Prior and Son and Mr. O. G. Orpen, for had they both won it this year the cups would have become their property. They were won respectively by Messrs. Harkness and Co., Hitchin, and the Rev. J. H. Pemberton.

Two classes for Garden Roses in bunches made a very fine feature. In the nurserymen's class for twelve bunches, Messrs. F. Cant and Co. were placed first with Claire Jacquier (Polyantha), charming little nankeen flowers; Dorothy Perkins, Laurette Messimy, a China with satiny rose and yellow blossoms;



Bothy for six men. (See page 112.)

brilliant H.P.'s, such as Alfred Colomb, Charles Lefebvre, Earl of Dufferin, Marie Baumann, Dupuy Jamain, and others being among them. Messrs. D. Prior and Son, Colchester, were second. With twelve varieties, three blooms of each, Messrs. D. Prior and Son came first; they staged very fine blooms of Maman Cochet and its white variety, Duke of Wellington, Fisher Holmes, Tom Wood, A. K. Williams, Mrs. J. Laing, &c. Messrs. Frank Cant and Co., Colchester, were second also with very good blooms.

Some very fine Teas and Noisettes were staged. Messrs. Frank Cant and Co. were placed first with Mrs. Ed. Mawley, Muriel Grahame, Comtesse de Nadaillac, Bridesmaid, Maman Cochet, and its white form, &c. Messrs. D. Prior and Son came second. In the amateurs' division the Rev. J. H. Pemberton was a leading exhibitor, and secured several first prizes; Mr. O. G. Orpen, of Colchester, was also a leading prizewinner.

Crimson Rambler, Conrad F. Meyer (hybrid Rugosa); Rosette de Legion d'Honneur, Camoens, Gustave Regis, &c. With six bunches the Rev. J. H. Pemberton had very good examples of The Garland (climber), Crimson Rambler, Fabvier, a bright crimson China; Macrantha, Gruss an Teplitz, a bright scarlet H.P.; and Gustave Regis. Mr. O. G. Orpen was second, his three best being Moschata alba, Perle d'Or, and The Garland. The method of staging has much to do with enhancing the beauty of such exhibits.

Some fifteen classes were devoted to hardy flowers, &c., and for Sweet Peas. In these classes some good blooms were staged. There were also tables florally arranged, epergnes, &c. Tables adorned with Sweet Peas were very good.

In the fruit classes Mr. Preece took the first prize for six dishes. He had Black Hamburgh and Muscat of Alexandria

Grapes, Barrington Peaches, Rivers' Orange Nectarine, Figs, and Melon, a very good collection. Mr. W. Green, Harold Wood, was second. With three bunches of black Grapes Mr. W. Green came first with Black Hamburgh. With three of white, Mr. Preece took the first prize with Foster's Seedling. He also had the best dishes of Peaches in Barrington, and of Nectarines in Rivers' Orange. Strawberries, Cherries, and Gooseberries were also shown.

Vegetables were numerous shown, especially by cottagers; The prizes offered by Messrs. Sutton and Sons, Reading, for six kinds brought some good collections. Mr. E. Barker was placed first and Mr. H. Holloway second.

A batch of Verbena, Warley Scarlet, were shown by one exhibitor. It was of a bright crimson colour, and a good companion to Miss Willmott. Mr. Leonard Brown, Seven Arches, Brentwood, had a table of Sweet Peas and hardy flowers; Messrs. Paul and Son, Cheshunt, had also bunches of hardy flowers. Mr. O. Chitty, Market Place, Romford, had Sweet Peas and other flowers; so had Mr. J. Russell, nurseryman, Brentwood, and in the open he had a large group of variegated shrubs of an extremely interesting character.

Huyton and Roby, July 23rd.

This is one of the several fine shows held in the suburbs of Liverpool, and although the atmospheric conditions were not of the best, yet the attendance was good and the quality of the exhibits a distinct advance on former years. The vice-chairman, Mr. T. D. Syers, in declaring the show open, said that residents must look upon the show as more than an event of one afternoon only, and that the show was not the primary object for which the society existed. The primary object was to encourage the cultivation of cottage gardening, and to improve the surroundings of the working classes. That fact had been brought prominently to the attention of many influential persons in the district, who had given special prizes, Lady Derby and Mrs. Parrington having done so for many years with such results that almost every class was firmly contested. The stimulus thus given had caused a piece of ground to be taken into cultivation at Huyton Quarry, and that was a distinct encouragement to the society, because it would employ the working classes, not on the show day only, but all the year round.

The classes for stove and greenhouse plants lacked a trifle in quality as against former years, a newcomer, Mr. J. Hare, gardener to G. H. Nisbett, Esq., Huyton Hey House, taking the lead for four with Croton Queen Victoria, Allamanda Hendersoni, Hydrangea T. Hogg, and Plumbago capensis. He was also successful with exceptionally fine Fuchsias, grand Caladiums, and Palms. Mr. J. George, gardener to T. Henshaw, Esq., Whitfield House, Roby, won with a pretty circular group of plants, the foreground well arranged, but a little deficient in the central mound. Mr. McFall, gardener to Mrs. Harding, Rydal House, Huyton, had a somewhat flat arrangement, but the plants were well distributed.

The double and single Tuberous Begonias and Gloxinias were simply superb in quality and high class culture. Mr. F. Bagnall, gardener to C. F. Boston, Esq., Charlwood, Huyton, and Mr. W. Lyon, gardener to A. Mackenzie Smith, Esq., Bolton Hey, Roby, won, the former in the class for six single, and the latter in the other two classes. Mr. Smith had Ixora Pilgrimi as the best single specimen stove or greenhouse plant, and secured the special prize also. All the Fern classes and single Caladiums went to Mrs. Harding with neat specimens. Mr. Smith's other successes were with Oncidium Lanceanum, best single specimen, and a double Begonia. Messrs. Syers and Geddes had two graceful hanging baskets. The best epergne was composed of mauve Sweet Peas and light Grasses from Miss Southall; the bouquet and basket of Roses from Mrs. and Miss Blain. There were seven table decorations, Mrs. Harrison winning with cerise Sweet Peas and Grasses, the green chiffon being edged with Smilax. Miss McCollam second with Iceland Poppies, Ferns, and Grasses; and Miss Fishwick third with Plumbago capensis entirely.

Roses were numerous, but showed the effects of the weather, Mr. J. Burrows taking both classes with Captain Hayward, Mdme. I. Perrier, Duke of Fife, and Prince Arthur, very good. He had the best eight bunches of Sweet Peas; Mrs. Harding for four.

Ixora Williamsi, Bougainvillea glabra, Allamanda Hendersoni, Pernettya fragnans, Bouvardia, and Gloriosa superba were extra choice cut flowers from Mr. McKelvie, gardener to J. Stone, Esq., Blacklow House, Roby. The herbaceous flowers were of the highest character, Mr. T. Henshaw winning handsomely in both classes, also for Carnations or Picotees; Mr. Syers having capital Cactus Dahlias.

Indoor fruit was fully up to the mark, Mr. W. Oldham, gardener to J. Beecham, Esq., J.P., Ewanville, Huyton, had splendid Black Hamburgh Grapes, Royal George Peaches, Violette Hâtive Nectarines, and Royal Sovereign Melon. Mr. J. Stone, for second, had specially good Black Hamburghs and Dagmar Peaches, the latter winning for him the single dish, and Violette Hâtive for Mr. Beecham. Sutton's Empress from Mr. Smith was

the premier Melon. Messrs. Beecham and Stone showed Black Hamburgh and Buckland Sweetwater Grapes, winning in the order named.

Never have vegetables been seen to greater advantage here, Mr. T. Henshaw leading with eight varieties: Ailsa Craig Onions, Walcheren Cauliflowers, Duke of Albany Peas, Model Carrots, splendid Celery, Al Canadian Wonder Beans, Duke of York Potatoes, and Brook's Tomatoes; second, Mrs. Harding. High class Tomatoes secured two prizes for Mr. Smith.

Cottagers' exhibits were excellent, Mr. Young, of West Derby, who is our pioneer in Carnation raising, staged a brilliant lot of flowers. The new seedlings, which are distinct and of great substance, were H. Middlehurst, a rich yellow ground Fancy; Miss Milly Fishlock, a charming pure white of fine form, grand in every way; Lord Kitchener, a deep venetian red; and Miss Lily Babcock, a superb pure white. Mr. Middlehurst sent a large collection of Sweet Peas; Messrs. Caldwell, Knutsford, miscellaneous cut flowers; and Mr. Roby, New Brighton, fine seedling Begonias. Lady Derby's prize went to Mr. G. Roscoe, and Mrs. Parrington's to Mr. R. Wall. Mr. Middlehurst, as secretary, was well to the fore.—R. P. R.

Southern Counties Carnation, July 24th.

On the Royal Pier at Southampton the sixth annual show was held on July 24, and was a distinct success. The blooms were of good quality, if not more numerous than in some seasons past. The Carnations were supplemented with a capital display of Sweet Peas, which aided in relieving the somewhat monotonous lines of formally dressed Carnation blooms. Mr. Garton, the hon. secretary, had all the arrangements well in hand.

CARNATIONS: Flakes and Bizarres.—For twelve dissimilar blooms four competed. Mr. F. Wellesley, Woking, secured the leading award with typical examples of John Beswick, Gordon Lewis, J. D. Hextall, Master Fred, Mrs. T. Lord, Sportsman, George Melville, Sport, John Wormald, J. W. Bentley, J. S. Hedderley, Mrs. Rowan, and Robert Houlgrave. Messrs. Thomson and Son, Spark Hill Nurseries, Birmingham were second; Messrs. Pembroke and Son, Walsall, third, both staging capitally.

For six distinct, Mr. J. Fairlie, Elmside, Avenue Road, Acton, was an easy first prizetaker with blooms of good quality of the undermentioned varieties: J. S. Hedderley, William Skirving, R. Houlgrave, Gordon Lewis, Mrs. Rowan, and Sportsman. Mr. J. J. Keene, Avenue Road, Southampton, was second with a set but little behind the first prize stand. Mr. D. Walker, Kay Park, Kilmarnock, third; seven competing.

White Ground Picotees.—For twelve dissimilar varieties five staged, making an imposing display. Messrs. Pemberton annexed the premier award with really fine examples of Lady Louise, Lavinia, W. K. Johnstone, Ganymede, Brunette, Favourite, Pride of Leyton, Amy Robsart, Thomas William, Fortrose, Little Phil, and Mrs. Payne. Messrs. Thomson and Wellesley followed in the order of their names. Eight staged in the class for six blooms, distinct, Mr. J. Fairlie winning with Favourite, Pride of Leyton, Mrs. Sharp, Amy Robsart, Fortrose, and Brunette. Mr. J. J. Keene second.

Yellow Ground Picotees.—Against six competitors for twelve distinct, Mr. Blick, gardener to Martin J. Smith, Esq., Hayes, Kent, secured the leading place with characteristic examples of Canteloupe, Isolt, and Mrs. Fox Pitt, for instance; Mr. F. Wellesley second, with Messrs. Thomson running him closely for second place. In the class for six distinct, no fewer than eleven competed, Mr. J. J. Keene being first with Gronow, Lauzan, Empress, Lady Bristol, Lady St. Oswald, and Gertrude. Mr. W. Spencer, 6, Bexley Villas, Windsor, second; Mr. E. H. Buckland, Southgate House, Winchester, third.

Yellow Ground and Fancy Carnations.—For twelve dissimilar there were seven competitors. Mr. F. Wellesley annexed the premier award with really fine specimens of Monarch, Argosy, Primrose League, Brodrick, Amphion, Mrs. F. Wellesley, Charles Martell, Hidalgo, Muleteer, Gipsy Queen, Perseus, and Ossian. Mr. Blick a close second; Mr. E. J. Wootton, St. Cross Road, Winchester, third. In the class for six, fifteen entered, the premier award falling to Mr. W. H. Parton, jun., King's Heath, Birmingham, with The Gift, Argosy, Galleo, Voltaire, Golden Eagle, and Eldorado; Messrs. W. Spencer and Fairlie second and third in the order their names are here given.

Carnation Selfs.—For twelve distinct, Messrs. Thomson and Son won with Lady Hermione, Mrs. Eric Hambro, Bert, Miss F. Simms, Dick Donovan, Nubian, Her Grace, Bomba, Germania, Britannia, Vivian, and Mrs. J. Douglas; Mr. Blick second, with Mr. Wellesley third. Mr. Neville, gardener to F. W. Flight, Esq., Twyford, Winchester, won for six with Mrs. F. W. Flight, Much the Miller, Seedling, Mrs. Shanton, Ensign, and Lady Jane Gray; Mr. W. H. Parton second.

Single blooms were a strong feature. Mr. F. Wellesley won first prize with J. S. Hedderley as a crimson bizarre, and with Gordon Lewis, as a purple flake, he was equally successful.

PICOTEES.—For any heavy edged red, Mr. J. J. Keene won with John Smith. With Thomas Williams Mr. J. J. Keene won

for a light edged red, and for rose or scarlet edged Mr. Wellesley won with Fortrose. Gertrude won for Mr. J. J. Keene first place for one heavy edged yellow.

The premier Self Carnation was a grand specimen of Sir Bevy from Mr. Parton. Mr. Wellesley had the premier Fancy in Charles Martell. The remainder of the cards were not on when our reporter left the show.

In the dinner table decoration there was centred much interest. With a tastefully arranged table of really good blooms Miss Minnie Snellgrove, Southampton, secured the coveted award; Mr. R. H. Jefferey second. For a bouquet of Carnations Mr. E. Wills, 163, Above Bar, Southampton, won first prize with an exhibit of admirable taste; Mr. E. C. Goble, Ryde, second. For a vase of Carnations or Picotees, Mr. E. H. Buckland won; Messrs. Blackmore and Langdon, Bath, second.

SWEET PEAS.—For nine distinct varieties, Mr. H. H. Lees, Grosvenor Villa, Portswood, won Messrs. Toogood's first prize with an exceedingly fine exhibit, such varieties as Duke of Westminster, George Gordon, Lady Grisel Hamilton, Lord Rosebery, Miss Willmott, and Black Knight being noteworthy. Mr. A. Maple, Aldermoor, Shirley, second; Mr. T. Hall, gardener to Sir S. Montague, Bart., South Stoneham House, third. The Rev. F. M. Middleton, Old Alresford, won Mr. Breadmore's special prize for nine distinct varieties, with typical examples of Salopian, Miss Willmott, Countess of Lathom, and Sadie Burpee; Mr. Maple second, Mr. Jeffery third, both staging well. Mr. Maple won Mr. R. Sydenham's prize with good produce of popular kinds; Mr. Jeffery second. A Sweet Pea decorated table created much interest. Miss Snellgrove also won Mr. Ladham's prize in this class quite easily with another of her harmonious blendings of colour.

Mr. J. Douglas, Edenside Nurseries, Great Bookham, staged an admirable assortment of leading Carnations, not for competition, which were much admired. Messrs. J. Cutbush and Son, Highgate Nurseries, also added much to the general interest of the show with a similar exhibit, consisting as it did of leading varieties. Messrs. B. Ladhams, Ltd., Shirley Nurseries, Southampton, had a large group of cut hardy border flowers: Gaillardias, Coreopsis Eldorado, &c., were noteworthy. Mr. W. Newton, gardener to W. Garton, Esq., Roselands, Woolston, had a fine group of miscellaneous plants. Mr. C. W. Breadmore, had four dozen bunches Sweet Peas.

Handsworth, July 24th and 25th.

The energetic committee, with their courteous and efficient treasurer, Councillor W. Roberts, and secretary, Councillor J. Edwards, have much reason to be gratified with the success of the nineteenth annual exhibition of this society, being on the whole the best yet held here. More especially does this apply to the groups of plants arranged for effect, and it may not be invidious to remark that the self-same four contestants fairly eclipsed their recent Wolverhampton demonstrations of a similar character, which is saying a good deal. But upon the present occasion, *mirabile dictu*, the hitherto almost invincible "groupists" from Cheltenham, Messrs. James Cypher and Sons, had to be content with second honours, the first falling to their strong and worthy opponent of recent years, that irrepressible Scot, Mr. J. V. Macdonald, gardener to G. H. Kenrick, Esq., Edgbaston, Birmingham. As a centrepiece he again adopted the usual cork-bark covered bridge, and surmounted with a fine specimen of *Phoenix rupicola*, while the two basements of the bridge were furnished with a rich complement of the elegant and coral red Fuchsia triphylla, with its dark green foliage, and for which purpose, grouping, not even the brilliant Ixoras can excel. Each of the four corner mounds of the parterre were surmounted with a richly coloured *Codiaeum* (Croton) Warreni. Several other varieties of the genus, Ixoras, Caladiums, Bamboos, a few Orchids, such as Cattleyas and *Oncidium flexuosum*, were among the chief plants which lent themselves to make up the well-earned artistic composition.

In equal richness of resources and artistic effect, Messrs. Cypher were a close second, but their centrepiece of tall and finely coloured *Codiaeums*, such as Reidi and Thompsoni, with other ornamental foliage subjects, was—perhaps unfortunately—topped with a magnificent specimen of *Phoenix Belmoreana*, its dark green massive fronds affording too great a contrast to the bright and rich coloration beneath, and in which a profusion of Cattleyas gigas, Gaskelliana, and other kinds contributed with great effect. The first prize carries £15 and a silver challenge cup value ten guineas, presented by Councillor T. E. Forsyth, to be won two years in succession, or three times in all, before becoming the absolute property of the winner. Messrs. Cypher having won it twice previously.

In the class for twelve stove or greenhouse plants Messrs. Cypher were well to the fore. A notable specimen of *Stephanotis floribunda* being especially attractive. Mr. W. Vause was placed second, and Mr. Oliver Brasier, of Edgbaston, third, with only moderate examples, the latter not being up to his usual form. An unique and striking feature was the choice and representative collection of Cacti, and which deserved a higher recognition than

the certificate of merit. This meritorious exhibit belonged to Mrs. J. G. Thompson, of Handsworth.

Roses, which were very well shown, formed an attractive feature. For twenty-four blooms, distinct, Messrs. Townsend and Son, Worcester, were to the fore, with the proprietors of the King's Acre Nurseries, Hereford, and Messrs. Perkins and Sons, Coventry, respectively second and third positions, the finest bloom in the contest being one of Horace Vernet, by the last-named exhibitor. Mr. G. Prince, Oxford, was the remaining exhibitor. For twelve Teas Mr. G. Prince proved victorious; second Messrs. Townsend, and third the King's Acre Nurseries. In the class for twelve bunches of Garden or Decorative Roses, distinct, there were four contestants, the premier prize falling to Mr. G. Prince with an elegant arrangement; second Messrs. Townsend, with a similar effect; and the King's Acre Nurseries came in third.

Collections of Fuchsias, Pelargoniums, Caladiums, and Coleuses were fairly well exhibited by local growers.

Floral dinner table decorations presented a highly attractive feature, no less than a "baker's dozen" exhibits filling the centre of a long tent. Mr. Robert Greenfield, jun., Ranelagh Mansions, Leamington, secured the first prize for a richly coloured and elegant arrangement of Cattleyas, *Odontoglossums*, and Francoa, supplemented with sprays of *Asparagus plumosus*. The second prize fell to Mrs. W. Overton, with a charming and most elegant arrangement of light pink Sweet Peas and sprays of *Selaginella*; it was greatly admired by the visitors. The third prize fell to Mr. N. Harper, nurseryman, Leamington, for an arrangement of Sweet Peas; fourth Mr. S. Rose, gardener to W. S. Vernon, Esq., Handsworth. Sweet Peas were very well staged by several exhibitors, the successful contestants being respectively Mrs. Goode (gardener, Mr. J. Innes), H. Floyd, Esq. (gardener, Mr. C. Brown), and Colonel Wilkinson (gardener, Mr. J. J. Canning).

Carnations and Picotees, though not numerous shown, were eminent for quality. R. C. Cartwright, Esq., King's Norton (gardener, Mr. G. Rudd), annexing the first prize with a superior lot of blooms; second, Mr. A. R. Brown, Handsworth; and third Mr. W. Pemberton, Walsall. In the class for twelve yellow ground or self Carnations or Picotees, distinct; the respective order being maintained in the case of twelve white ground or Self Carnations, distinct, shown as grown.

Fruit formed a rich and attractive feature. For a collection of not less than ten kinds and varieties. First prize, £7, and silver challenge cup, value twenty guineas, presented by the late J. H. Penson, Esq., J.P., to be won two years in succession, or three times in all, Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, was to the front with a large collection, containing nearly forty dishes. It comprised fine and highly finished Black Hamburgs, Madresfield Court, Muscat Hamburgs, three large Melons, Clapps' Favourite Pears, Worcester Pearmain, Lady Sudeley, Beauty of Bath, and Washington Apples, fine Circassian and Black Tartarian Cherries, Keith's Favourite, Czar, and Oullins Early Gage Plums, Latest of All and Royal Sovereign Strawberries, Raymaker, Bellegarde, and Royal George Peaches, Lord Napier and Early Rivers Nectarines, Negro Largo and Brown Turkey Figs, Muscat of Alexandria Grapes, and two dishes of Oranges. The second prize fell to Mr. J. Jones, gardener to Mrs. F. Need, who had an excellent, though not nearly so large a collection as the veteran fruit grower of Elvaston Castle. Mr. Jones' complements were fine Madresfield Court, Muscat of Alexandria, Foster's Seedling, and Gros Maroc Grapes, Crimson Galande and Sea Eagle Peaches, Pineapple Nectarines, Hero of Lockinge and Shamrock III. Melons, the latter a large and finely netted yellow skinned fruit, and a good dish of Oxonian Strawberries.

Grapes were finely represented, more especially the black kinds. For six bunches (three white and three black), first prize £7, with a silver challenge cup value ten guineas, presented by G. H. Johnstone, Esq., to be won three times in all, or two years in succession. The first prize was annexed by Mr. Goodacre with two bunches of Muscat Hamburg, Cannon Hall, and Black Hamburg; second, Mr. W. A. Coates, gardener to Colonel Platt; third, Mr. J. Jones, gardener to Mr. F. Need; and fourth, Mr. R. Grindrod, Hereford.

The local gentlemen's gardeners and amateurs were also most creditably represented in numerous array. Likewise the cottagers. Non-competitive exhibits were in strong force. A silver cup was awarded to Messrs. Hewitt and Co., Solihull, for a fine collection of hardy herbaceous and other flowers. A gold medal was accorded Mr. Greenfield, Leamington, for a fine lot of his *Asparagus myriocladus*, and *Verbena* Miss Wilmott. A silver-gilt medal to Messrs. Dickson, Chester, and silver medals to others, including such as The King's Acre Nurseries, and Mr. W. B. Child, Acocks Green. Twelve certificates of merit were given to Mr. J. B. Grove, Erdington, Messrs. Simpson and Sons, Messrs. Yates, Councillor Mr. Waters, and Mr. J. Boston, Messrs. Austin and Co. and Messrs. Webb and Sons, Stourbridge, for excellent exhibits, chiefly hardy garden flowers.

The show was held in the Victoria Park, and opened by Lady Meysey Thomson, attended by a numerous retinue of ladies and gentlemen.

Visit to a Market Garden.

Several horticulturists lately made an inspection of the nursery and market garden at Craigmillar, Edinburgh, belonging to Mr. John A. Murie, and were much gratified with what they saw. To begin with, it may be mentioned that the soil is of a light, porous, friable nature, on a gravelly subsoil, naturally well drained. The feeding and manuring of the soil is on a liberal scale, for without continuous applications of the necessary plant food such excellent crops as were examined could not be produced.

On entering the grounds the first crop that attracted attention was a large brake of Cos Lettuce, ready for the market. The plants are so equal that had they been grown in a mould they could not have been more like each other. Leeks were here by hundreds of thousands in all stages, some lately planted, others already a good size having been planted about two months. Parsley is grown extensively, and the brakes of Cauliflowers, Brussels Sprouts, and Cabbage are healthy and vigorous.

We noticed a piece of ground lately cleared of early Turnips which had been cleaned (not dug), marked off in squares; and was in process of being planted with Cauliflowers and Cabbages, the latter grown from seed of Mr. Murie's saving, and a particularly fine strain it was. Early Potatoes are grown, but not so extensively as the green crops above mentioned. It is worthy of notice that the soil is clean and free of weeds, and that it is most liberally treated with fertilising material suited to the various crops. It is gratifying to see so many good vegetables grown within two miles of the centre of Edinburgh. The offices and sheds for packing and conducting the business are commodious; a large well-built house is devoted to the forcing of Rhubarb and the growth of Mushrooms. Mr. Murie accompanied the party and contributed information of a valuable nature to those who had the pleasure of being present.—P. L.

Plan of a Bothy.

Although two plans of model bothies have been recently published in the Journal, for the sake of diversity if for nothing more, the reproduction of the one herewith given, and one more soon to follow, may be allowed. Readers in general will agree that too many good plans of bothies can hardly be given.

The plan given to-day was one of those contributed in the competition last April, and came from Tekley, Yorkshire. The following letter and particulars accompanied the drawing:—

The chief aim in preparing this design has been to make the general arrangement as simple and economical as possible, and to produce a design which shall meet the domestic requirements necessary for the comfort and accommodation of six gardeners.

The plan consists of a large kitchen, 24ft. 6in. by 14ft. 6in., with small pantry, 6ft. by 4ft., and with large ingle-nook, 12ft. by 3ft., side lighted, and with shelves provided at the side of the range for utensils, &c., whilst cooking. The kitchen has a south-east aspect, being entered on the east side, and lighted from that side by two windows, and at the other end by a mullioned window, which gives light to the sink. The pantry is added as an extra convenience, which can be dispensed with if desired.

A store or extra bedroom, 10ft. by 6ft. 6in., is approached from the kitchen, a corridor 4ft. wide leading to the six bedrooms, and back entrance. In the yard are placed coal place, 9ft. by 6ft.; ashes, 6ft. by 3ft.; and two earth closets, 6ft. by 3ft. These latter outbuildings are roofed with 4in. concrete slabs.

From the kitchen also access is gained to a lavatory, which is provided with three lavatory basins and a bath, which the author of the design considers essential where so many men are concerned, and for this arrangement it has been taken for granted that water is easily obtainable, and therefore the extra amount of cost entailed by the use of piping is not to be considered when compared with the comfort this arrangement affords. The cold supply is laid on to the bath and kitchen sink, but there is no hot supply, so that when hot water is wanted it will be obtained by heating the amount required in the kitchen range, a side boiler being provided for that purpose. Of course, if this arrangement proves to be too expensive, the water piping can be dispensed with and water carried in for domestic purposes.

A level site has been chosen, and this is drained by means of land pipes placed in rows 12ft. apart along the building, the whole of the site then being covered with 4in. rough concrete. Sleeper walls are provided in kitchen as extra support for joists, and proper ventilation to space under floor, as shown on section.

The walls are 14in. stock brick on 9in brick or concrete footings, pebble dashed outside, and two-coat plaster inside. Plinth course being made by a double course of slates. Remaining walls 4½in. thick.

Wooden floors have been used throughout, as the joists, being of small scantlings (1ft. 6in. apart) in short lengths and seconds quality, will not differ so much with concrete in cost, and the

rooms are made much more comfortable by its use, but this is a detail which is easily altered.

The roof is composed of 3½in. by 2in. spars, 9in. by 2in. hip rafters, 7in. by 2in. ridge, 4½in. by 3in. wall plate, 3in. by 2in. ceiling joists, and roof trusses where hips intersect of scantlings 3in. thick, the roof being covered with pantiling.

Doors throughout are plain cross braeed batten doors, with the exception of the front door, which is double margin, with flush boarded panels, the two top panels being glass. All skirtings are 5in. by 1in. plain chamfered and moulds, 3in. by 1in. The windows are casement openings outwards, the top light fixed.

Shelves, 18in. by 1in., in store, pantry, and kitchen. A cupboard is arranged over a nest of drawers in the south-west corner of the kitchen (as shown on section). The inside walls are covered with two coats of plaster, with the exception of the coal place and E.C.'s, which are whitewashed. The glass is 21oz. throughout, and 5in. by 4in. zinc gutters and 2½in. fall pipes connected with 4in. earthenware drains are used for the disposal of rain water.

All exposed woodwork is given two coats of paint. The estimates for the various branches of the work I have tabulated on the drawing, and as I have gone as thoroughly into the matter as time will allow, I think the amounts are fairly correct.—INTERESTED AND FRIEND.

Tubs for Shrubs.

We have the greatest faith in the constructive ability of gardeners, and their faculty to convert various sundry materials to uses as occasions demand. When a tub for a shrub or for plants is necessary, the gardener furnishes, from divers sheds and cellars, the casks and barrels he possesses. He examines them, he chooses the fittest; he cleans, purifies, paints, and adorns them, and in other ways prepares a fitting receptacle for his erstwhile needs.

Ever and anon, however, the true ornamental gardener feels that a more finished article than his limited resources allow him to produce would be better; but failing in his knowledge about where to get the superior article, the old green painted tubs are still requisitioned. It is a pleasure, therefore, to be able to name a firm that has lately

specialised in "tubs for shrubs"—to wit, Messrs. Champion and Co., corner of Old Street and City Road, London, E.C. At their extensive premises one can see all patterns and sizes of the most excellently finished ornamental tubs, made of seasoned oak and teak wood, polished, and slightly varnished, and handsomely coopered with hoops that are either copper or are galvanised, and painted according to order. Numbers of our readers will have



Round Tub.

personal experience of the beauty, substantiality, and utility of such tubs as we allude to. The figures illustrating these notes depict three main forms of tubs such are kept in stock by the firm; but Messrs. Champion make any pattern, if ordered. Thus, should one have an inconvenient, awkward, or unsightly corner in need of a special style of article, what can be done is to sketch the place as it appears, and, along with measurements, send these to Champions for their suggestions and workmanship. The wood employed in making of these tubs is all seven to ten years seasoned. The cheapest and most usually sought for tubs are those of round form. The four stock sizes are: No. 1, ¾-in wood, 15in high, 18in diameter (top). No. 2, ¾-in wood, 19in high, 22in diameter. No. 3, 1-in wood, 23in high, 26in diameter. No. 4, 1½-in wood, 27in high, 30in diameter. The prices are: No. 1, 15s.; No. 2, 21s.; No. 3, 25s.; No. 4, 32s. 6d.

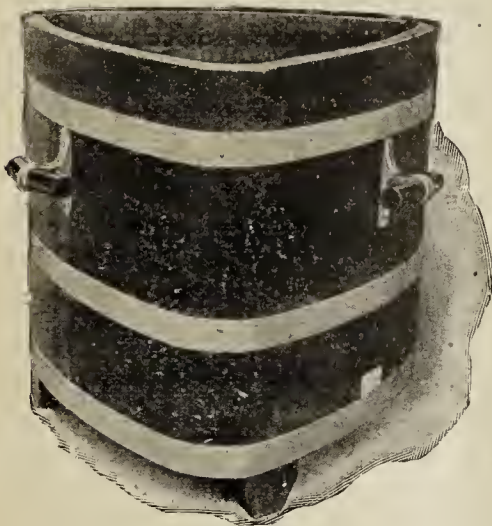
From the standpoint of usefulness, probably the square tubs rank next. These are made with rounded corners, and look really admirable. The triangular tubs are extremely elegant and useful for a variety of purposes. The greatest novelty, however, are the squares with detachable sides. Such arrangement will be of great assistance to cultivators of Oranges, Bays, Hollies, &c., where these are in tubs, as the soil can be removed from one or more sides at a time, and fresh material added without having to go to such trouble, as well as risk, as is necessary in ordinary fixed tubs. These tubs cost 50s.

The drainage of the tubs is thoroughly good, and rollers can be affixed to the base of each tub if necessary, and this is eminently serviceable for the large sizes. Well made tubs, like these, add immensely to the appearance of forecourts, terraces, halls, corridors, odd corners, and in the garden generally, and they are made to last for generations.

THE BEE-KEEPER.

Robbing.

Autumn is the time when the worst kind of robbing is probable, and it therefore behoves the bee-keeper to use every endeavour to prevent it. Novices are often puzzled to know when robbing is in progress in its earliest stages. The method of detecting it is very simple. The robber bee, when it attempts to enter the hive which is being robbed, has an unusual appearance in flight. Its legs apparently hang from behind, and it approaches the entrances with



Triangular Tub.

gradual jerky flights—something like a hawk when it sets its prey—and as soon as it is discovered, or sees its chance of admission closed, it quickly dodges away to a new position to escape the sentinels. A still further confirmation that it is a robber may be obtained by watching the entrance of the hive closely after the entry of the supposed robber bee. An inhabitant of the hive comes out very leisurely and takes wing in the ordinary way, but with the robber the case is different. Its appearance at the entrance of the hive is hurried, and as it no doubt experiences a difficulty in carrying such an abnormally heavy load, it will rise and fall

several times, and finally take its way home with a heavy buzzing flight, often striking objects in its path and falling almost to the ground. The robber bee, on the alighting board when captured and surrounded by enemies, acts in a very singular way. If she is an old one her instinct prompts her to remain perfectly still with her abdomen contracted, suffering the bees to handle her in their own way. She never attempts to retaliate, as that would mean exposing her weak points. The Rev. L. L. Langstroth, the father of American bee-keeping, says—"There is an air of roguery about a thieving bee which to the expert is as characteristic as are the motions of a skilful pickpocket to a policeman."

The method of stopping robbing differs with circumstances. If everything containing honey is made bee-proof, and all entrances to hives are contracted, so that the inmates can better protect themselves, there will be no robbing. There is nothing like prevention, and immediately the season is on the wane the apiarist must be on his guard and reduce all the entrances to hives. Care must be taken not to spill syrup or leave honey in exposed positions. This is the most frequent cause of the evil.

To stop robbing when it is in progress smear the entrance with a few drops of carbolic acid, and if it has not already been done reduce the entrance. The carbolic acid should in this case be put on with a brush or feather, as the skin is injured by contact with it. This will quickly quell the disturbance and restore tranquillity in a short time. If it is ascertained that the robbers come from the same apiary, give them all a dose of smoke at the entrance about every quarter of an hour. This will make them all better tempered and keep them at home.

If the robbing is continued fill a water-can and put on a very fine rose, giving every colony a cold douche at the entrance. This is effectual, but a lot of bees are lost. It is advisable at this season to feed all colonies up simultaneously and manipulate all hives in the evening. There will then be little or no desire to rob.—E. E., Sandbach.



Square Tub.

TRADE NOTICE.—Messrs. W. H. Hudson, Chiswick, London, W., desire to state that their seed, bulb, and Japanese Lily business is entirely carried on at 34 to 36, Chiswick High Road, London, W. The local retail shop at 199, High Road, Kilburn, has been disposed of to Mr. Golding, and has now no connection with Messrs. Hudson. All orders by post should in future be addressed to the Chiswick address.

WORK FOR THE WEEK.

Fruit Forcing.

CUCUMBERS.—Where it is desired to have fruit in the autumn and onward through the winter, seeds may be sown early in August, and the plants being ready for planting early in September, they will, in a light, well-heated structure, with a good bottom heat, give fruit through the autumn months, and not then being overcropped, continue in bearing during the winter, a succession of bearing wood being maintained by cutting out exhausted and training in young for the purpose. The soil for growing them where eelworm has been troublesome should be disinfected either by dry-heating to about 212deg or soaking with boiling water. This acts admirably, so also does mixing the compost with one part in twenty-eight of a mixture of eight parts basic cinder phosphate and three parts double sulphate of potash and magnesia or refined kainit, 1lb of this mixture being added to and thoroughly incorporated by turning two or three times, then left a month or six weeks before using for Cucumbers, turning and mixing well at time of using. This renders the turf mellow and in excellent condition for use.

VINES IN POTS FOR EARLY FORCING.—The canes for starting in November, to ripen Grapes in March or April, ought now to have the wood thoroughly ripe and the buds plump. If not, keep the house rather warmer by day, 80deg to 85deg, closing early so as to raise the temperature to 90deg or 95deg, and throw the house open for the night. The foliage must be well exposed to light and as near the glass as possible without touching. Supply water or liquid manure in the case of Vines not inclined to luxuriance in sufficient quantity to prevent foliage becoming limp, but do not give it until the soil is getting dry.

Lateral growths must be kept in check, leaving no more than are absolutely necessary to appropriate any excess of sap, and so prevent the principal buds starting. When sufficiently ripened, as they are when the wood becomes brown and hard, and the eyes are prominent, they should be removed to a position outdoors in the full sun, standing them on slates or boards in front of a south wall, fence, or building, securing the canes to the face of the wall, only giving water to prevent the leaves falling prematurely, and having some waterproof material at hand to throw the water from the pots in case of heavy showers occurring. In this position they will rest, even if the leaves are not actually shed, provided they are not kept too moist. When the leaves turn yellow cut them close to the cane, but without injury to the buds, and shorten the Vines to the length required, or from 6ft to 8ft. Dress all the cuts carefully with styptic or patent knotting. The Vines should be placed in a cool, airy, dry place until required for forcing. Though dryness at the roots is desirable, the soil must not be allowed to become dust-dry, and the pots must be protected from frost by some dry material placed round and over them. It will not, of course, be necessary if frost has not access to the house.

EARLY FORCED PLANTED-OUT VINES.—A dry atmosphere is now necessary, not so much to ripen the wood as to induce rest. All the laterals must be kept stopped and the house cool, with moderate dryness at the roots. The inside border may require water, for it is essential that the roots be kept healthy, and the soil not allowed to crack; but if the border has been mulched watering may not be necessary. A moderate extension of the laterals will be sufficient to keep the principal foliage in health. Where the Vines are in an unsatisfactory condition, preparation should be made for lifting, getting fresh loam and clean drainage, so that the work can be quickly done when begun. One part of the border only need be operated upon at once, the inside one year and the outside the next. This prevents loss of crop. The roots should be lifted and laid in fresh soil nearer the surface, whilst there is foliage on the Vines; therefore, work of this nature ought not to be delayed beyond the early part of September, in the case of Vines that ought to be started early in December. The Vines will need pruning by the middle of September, or, when lifted, a little later.

HOUSES REQUIRED FOR EARLY FORCING.—Vines that have not been forced early hitherto, and are required for that purpose, will, as soon as the crops are off, need to be thoroughly syringed to cleanse them from dust and pests, applying an insecticide, if necessary, and if there is any doubt about the ripeness of the wood or the plumpness of the buds it will be necessary to keep the house rather close by day, but with sufficient ventilation to cause evaporation and allow the moisture to escape. Give no more water than will prevent the foliage becoming limp. If the weather prove wet and cold, employ fire heat to maintain a temperature of 70deg to 75deg with moderate ventilation, and turn the heat off at night to allow the pipes to cool, increasing the ventilation so as to induce a thorough draught, and this will

soon cause the wood to harden and the buds to plump, insuring rest, which for Vines to be started in December should be complete from the middle to the end of September. When the wood is ripe ventilate fully day and night.

VINES CLEARED OF GRAPES.—Through crops hanging after being ripe the Vines often become infested with red spider, and by growing plants in the house they are sometimes attacked by scale and mealy bug, the dry atmosphere also encouraging thrips. Thoroughly cleanse the Vines, fumigate or vaporise on two or three consecutive evenings for the thrips, and repeat in a week or ten days; syringe forcibly two or three times to eject red spider. Mealy bug and scale may be eradicated by syringing with the following solution:—Soft soap $\frac{3}{4}$ lb, water $\frac{1}{2}$ gal. Dissolve by boiling, and while hot add $\frac{1}{4}$ pint of paraffin oil, stirring briskly till emulsified; then dilute to 6 gals with hot water, and when cooled to 135deg apply with a syringe, wetting every part of the Vines. Repeat in the course of four days or a week, and again at a similar interval.

Have the laterals fairly in hand, not closely pinched, unless the Vines are very vigorous and not ripening the wood kindly, when keeping the house rather dry at night, with all the ventilation possible, and somewhat close and warm by day, will promote the ripening of the wood and buds. In stopping vigorous Vines regard must be had to the principal leaves and buds, for when all the growth is removed as made, and the leaves injured, it may cause the pruning buds to start, which must be prevented by allowing a little lateral growth and keeping the soil dry at the roots to the extent of causing the foliage to become a little limp. Weakly Vines may be fed with liquid manure and the laterals allowed to extend, but whatever extension is permitted the extraneous foliage must not in any way interfere with the free access of light and air to the principal leaves, which must be kept healthy, and thus appropriate some of the food and store it in the adjacent wood and buds. Free ventilation will be necessary day and night.

GRAPES RIPENING.—Whilst ripening Grapes swell considerably, therefore do not allow any deficiency of moisture in the border. Give, if needed, a good supply of water or liquid manure, and in the early part of the day, so that superfluous moisture may be dissipated before night. Heavily cropped Vines require time and copious supplies of liquid manure, which if it does not help the current crop, will prevent the exhaustion of the Vines. A good rest at night in a temperature of 60deg to 65deg with air is a great aid to Vines taxed to the utmost by weight of Grapes. A moderate amount of air moisture is essential to the health of the Vines, sprinkling the paths and borders occasionally, and, if possible, allow the laterals to extend, but full or over-cropped Vines rarely can cater for more than the principal leaves and Grapes. Admit air constantly, enough with gentle warmth in the hot-water pipes to ensure a circulation, and maintain a temperature by day of 70deg to 75deg, keeping through the day at 80deg to 85deg, or 90deg with sun, and full ventilation.—ST. ALBANS.

Kitchen Garden.

CELERY.—Where previous attention has been given to an early row or two of Celery with a view to having some ready for use shortly, the final earthing ought now to be given. Should the soil be dry first give a liberal soaking of water or liquid manure, or a dressing of artificials may be washed in. Secure the leaves together in an upright position so as to protect the hearts of the plants, and aid also in blanching. Only good, well-grown plants possessing size, substance, and moderate length ought to receive the final earthing at this comparatively early date. If still small and growing well, defer the last earthing for a time, even if this makes the time of obtaining blanched produce later than desirable.

During the course of growth Celery will need several copious waterings, so as to maintain a constant supply of soluble food for the active roots. Clear water is best at first; but after the roots become numerous and ramify well, rapidly absorbing the available food in the soil, liquid fertilisers can, with great advantage, be given. Natural stimulants made from cow manure, fowl, pigeon, or horse dung, are excellent. As a change scot water will be found beneficial. Occasionally supply guano or a general artificial mixture soaked in water and mixed at a safe strength. Although good for the plants liquid manure must be supplied intelligently, not surfeiting the soil or giving it when the latter is in a dry state. Once or twice a week, according to the vigour of the plants, will be found ample.

After the first extended period of active growth Celery usually needs some attention in trimming, removing sucker growths and the small basal leaves and leafstalks, at the same time clearing away weeds. The principal and remaining leafstalks should then be lightly drawn together, and held with ties of raffia grass. The first earthings are then easily carried out.

SOWING CABBAGE.—In many districts the main sowing of Cabbage for spring use is best made now, while in others, deferring doing so later will be found to answer. It is not, however, desirable to depend on one sowing only. A later one may be made a week or ten days hence, and plants from both cultivated. Should the soil be very dry, after preparing it and breaking it well down, give a copious watering. Then sow the seed broadcast

thinly, and cover with a thin layer of soil. The varieties most in favour for present sowing are Flower of Spring, Ellam's Dwarf Early, Mein's No. 1, and Wheeler's Imperial.

FEEDING TOMATOES.—Tomatoes outdoors, or under glass in pots, boxes, or borders constantly require attention. Having made strong growth, produced fruit freely, and being furnished with a good root system, the demands for moisture are imperative and must not be neglected or the swelling of the fruit, already set, will be arrested, and further bunches of flowers prevented setting. It is, in the first place, highly important that the soil moisture about the roots be fully maintained. This forms a good foundation for any stimulants which it will be necessary to give as a means of supplying nutriment. Various solutions made by soaking different manures, such as cow, horse, fowl, at the rate of a peck to 30 gals of water can be given at frequent intervals. Plants with the roots confined will require it most. The outdoor plants may be provided with a mulch of manure over the roots, this serving to prevent rapid drying up, and promotes the production of rootlets. Also under glass a mulching serves the same useful purpose, after one or two top-dressings of soil have been added.

PEAS AND BEANS.—Rows of Peas for a late crop and Scarlet Runner Beans need moisture at the roots to enable the flowers to set well. To facilitate the application of water and liquid manure, and also to prevent rapid evaporation of moisture, lay down a mulching of manure on each side of the rows.

TURNIPS.—Turnips sown now will, if the ground is fairly moist, germinate and grow away more freely than hitherto. A spell of hot weather, however, coming just as the seedlings push through, an attack of Turnip fly often carries them off. The best course to follow is to sow a little stimulating mixture in the drills at the time of sowing to enable the plants to push rapidly along after germination. Equal parts of salt and guano, about 2 lb of each to a square rod of ground, sown in the drills, is excellent. Superphosphate also scattered along the drills is a good stimulant. The seed must not be sown thickly, so that the plants may start strongly from the first. Thin the seedlings as early as possible, and keep the hoe at work when possible; also giving light dustings of soot.—EAST KENT.



* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

MUSCAT GRAPES SHANKING AND SHRIVELLING IN THE STALKS (J. T.).—The Grapes are affected by shanking, one of the most perplexing maladies that affect Grapes, and still remains the most obscure. It has been attributed to over-cropping, thus overstraining the powers of the Vine, but over-burdened Vines may not show signs of shrinking, the berries being only defective in colour. Destruction of foliage by red spider or scorching is another assumed cause, yet the scarcity of leaves or elaborating power does not always result in shanking. Chills or sudden changes of temperature is another of the suggestions leading up to shanking, but there may be rusted Grapes yet no shanking. Excessive dryness at the roots has also been saddled with shanking, but our experience is the opposite. The real cause in our practice has proved to be that of the roots getting into a cold subsoil, or the border becoming sodden and sour, whereby the young rootlets are destroyed, or the food supplied of a corrosive nature. This may be accelerated or even produced by excessive supplies of water or too abundant applications of liquid manure. Planting in borders composed of too close or too rich materials is a common cause of shanking, as the food elements are too crude and not sufficiently nitrified, and the roots, though sometimes plentiful, are very soft and spongy, often perishing in wet periods. Indeed, we regard an unfavourable rooting medium and a sodden and sour soil as the real cause of shanking. In this we are justified by the fact where the roots are at fault, as they usually are, either through being in a border which is too rich and close, or too wet and sour, the only remedy that can be adopted is to take the Vines up carefully and renew the border, taking care to introduce a greater proportion of porous materials than before, providing good drainage with underdrains, to carry off superfluous water, these having proper fall and outlet, and then replant the Vines, keeping the roots well up to the surface. The recent heavy rains would no doubt further the shanking, but

it shows the soil to be non-porous, hence too wet, and the components solved sour. By renewing the inside border one year, and the outside another, the Vines may be lifted and the border renovated without loss of crop.

RHODODENDRONS, A SELECTION (W. H.).—Rhododendrons do not necessarily require a peaty soil, but they prefer it, and do well in it. Any good loamy soil suits them. They do not thrive without much care in mulching and watering in a sandy soil. They refuse to grow in a soil containing lime. The peat you send a sample of is good; it is sweet, fibrous, and not too spongy. This, incorporated with your garden soil will do admirably. The following are varieties such as will give you satisfaction; and they can be obtained from John Waterer and Son, American Nursery, Bagshot: Lady Eleanor Cathcart, Mrs. Tom Agnew, Jno. Waterer, Kate Waterer, Mum, Gomer Waterer, Sappho, B. W. Elliott, Chionoides, Delicatissimum, James Mason, John Walter, Madame Carvalho, Minnie, Mrs. Jno. Pem, Princes Hortense, and Princess Mary of Cambridge.

TOMATO PLANT DISEASED (A. W. R.).—The plant we found on careful examination microscopically to be infested with the parasitic fungus known as *Macrosporium Tomato*, syn. *M. lycopersici*, which causes the disease called "black stripe." It appears to be present wherever the Tomato is cultivated. The fruit is most frequently attacked, but the fungus is also often present, as in your case, on the leaves and stems. It is a near ally of, if not identical with, Potato leaf curl fungus, *Macrosporium solani*, which affects the stems, leaves, and "apples" of the Potato in a similar manner to the fruit of the Tomato, indeed, we cannot discover any distinctive feature, only what may be due to host-plant influence. Black stripe certainly is one of the worst fungoid diseases affecting the Tomato. The leaves of the plant first curl, and at this stage there is usually no external signs of the fungus, but presently brownish streaks or stripes appear on the stem, the petioles of the leaves, and the leaves themselves become blotched, and the fruit also is affected, usually at "eye" or style end where the floral organs have been, or at the heel or point of insertion of the stem, though the stripes or blotches may appear on any part of the fruit. According to some cultivators the disease originates in the soil, others attribute it to the seed, and fungologists regard the fungus as a wound-parasite. One thing is certain; the disease is propagated by spores, and the mycelium runs throughout the stem of the growing plant, without apparently doing any injury until it reaches the soft young growth; here a shrinkage is caused, also discoloration of portions of the stem and foliage and fruit, which become visibly affected with dark brown or black stripes and blotches, and in bad cases, not infrequently, the upper part of the plant collapses altogether or the crop is ruined. This appears the exact condition of your plant. It was quite sound in the root-stem and roots, even the stem above ground was not affected in the tissues only where the black stripe appeared, and a similar remark applied to the leaves and fruit. If, therefore, the disease originated in the soil, or even in the seed, it left no trace microscopically, the symbiosis being complete and indiscernible even by the microscope. This is not remarkable, for even in the case of Tomato leaf rust (*Cladosporium fulvum*), and also in that of sleeping disease (*Fusarium lycopersici*), the disease may be present without visible sign or even when examined microscopically; nevertheless, it is well known that seed obtained from such plants produce diseased seedlings. On the other hand, sound seeds saved from fruits affected with black stripe, blotch, or rot, do not become affected with that disease, or even with "leaf rust," often confounded with black stripe from its also causing brown stripes on the stems and blotches on the fruit, and also with sleeping disease. This favours the fungologists' point of view, viz., that black stripe is a wound parasite, attack being due to minute cracks in the cuticular tissues or softened parts of the cuticle from moisture resting on particular parts, such as round the style, or at the point of insertion of the stem of the fruit. The data means culturally that Tomato houses are kept much too close and moist, that they have not enough air, and the atmosphere not buoyant so as to prevent the deposition of moisture on fruit. Indeed, it implies a freely ventilated atmosphere, all the light possible, and moisture kept from the fruit and stems, not allowing the faded floral organs to remain after fertilisation is effected. Checks of all kinds, such as forcing treatment at one time by keeping relatively close and moist, and at another inducing stuntedness by excessive ventilation and sudden drying of the atmosphere on a recurrence of bright weather after a dull period, must be carefully avoided, also the use of green stable manure, either as a mulch or on the soil, as this is considered to favour the disease, and also causes the fruit to crack, thus rendering it susceptible in a high degree. Instead of a manure calculated to induce a gross habit of plant, a mixture of 2½ parts superphosphate, 2 parts sulphate of ammonia, and 1 part muriate of potash, well mixed, and 3oz applied per square yard as a top-dressing; or as a liquid manure, 1oz per gallon of water. This certainly fortifies the plant against disease, and favours the crop without inducing over-luxuriance. We do not see what you can do more to repress the disease than destroying plants by fire as soon as they show signs of it, and spraying with potassium sulphide solution. Sterilisation of the soil is advised for this disease, but the heat

must not exceed 180deg or 212deg, the former being safe, or the nitrifying micro-organism would be prejudiced, but if the disease goes over in the seed, as we suspect in many instances, it is all-important to destroy the disease plasma thereon or attached, which would probably be effected by steeping the seed before sowing in water at a temperature of 130deg to 135deg for five minutes, but on this point we have no definite data, and it would be well to ascertain this by experiment, so as not to destroy the vitality of the seed.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (T. G. T.).—*Sinningia tubiflora* Fritsch (syn. *Gloxinia tubiflora*, Hook, in "Bot. Mag." t. 3971.) (R. A. C.).—1, *Verbascum nigrum*; 2, *Lysimachia vulgaris*; see also next week.

Trade Catalogues Received.

E. H. Krelage and Son, Haarlem, Holland.—*Dutch Bulbs.*

Ant. Roozen and Son, Overveen, Haarlem, Holland.—*Bulbs.*

B. S. Williams and Son, Victoria and Paradise Nurseries, Upper Holloway, London, N.—*Bulbs.*

Covent Garden Market.—July 29th.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, Tasmanian, case	12	0 to 14	0	Lemons, Messina, case	10 0 to 15 0
Apricots, per box	1	0	1 3	Oranges, case	10 0 20 0
Bananas	10	0	15 0	Pines, St. Michael's	3 6 5 0
Cherries, box	1	3	3 0	Strawberries, South-	
½-sieves	8	0	10 0	ampton, per bskt.	2 6 3 0
Grapes, Hamburgh	1	6	2 0		

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 0 0	Leeks, bunch	0 2	to 0 2½
„ Jerusalem, sieve	1 6	0 0	Lettuce, Cabbage, doz.	1 0	0 0
Batavia, doz.... ..	2 0	0 0	Mushrooms, forced, lb.	1 0	0 0
Beet, red, doz.	0 6	1 0	Mustard & Cress, doz.		
Cabbages, Spring, tally	2 0	3 0	punnets	1 6	0 0
Carrots, bunch	0 2	0 0	Onions, bushel	3 0	0 0
„ new, bnch.	0 6	0 8	Parsley, doz. bnchs. ...	2 0	0 0
Cauliflowers, doz. ...	4 0	5 0	Potatoes, cwt.	6 0	8 0
Corn Salad, strike ...	1 0	1 3	„ Jersey, new, cwt.	14 0	15 0
Cos Lettuce, doz.... ..	1 0	0 0	Radishes, doz.	0 9	1 0
Cucumbers doz.	3 0	4 0	Spinach, bush.	2 0	0 0
Endive, doz.	1 6	0 0	Tomatoes, English, lb.	0 6	0 7
Herbs, bunch	0 2	0 0	Turnips, bnch.	0 0	0 2
Horseradish, bunch ...	1 3	1 6	„ new, bnch.	0 5	0 6

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.	
Arums, doz.	2	0 to 3	0	Marguerites, white,		
Asparagus, Fern, bnch.	1	0	2	doz. bnchs.	3	0 to 4
Carnations, 12 blooms	1	0	1	,, yellow, doz. bnchs.	1	6
Cattleyas, doz.	10	0	12	Myrtle, English, bunch	0	6
Croton foliage, bun. ...	0	9	1	Odontoglossums	4	0
Cycas leaves, each ...	0	9	1	Orange blossom, bunch	2	0
Eucharis, doz.	2	0	3	Pyrethrum, double,		
Gardenias, doz.	2	0	2	doz. bun.	4	0
Geranium, scarlet, doz.				Roses, Niphetos, white,		
bnchs.	4	0	5	doz.	1	0
Gladiolus, The Bride,				,, pink, doz.	2	0
doz. bun.	4	0	6	,, yellow, doz. (Perles)	1	6
Iris, Spanish, doz. bun.	6	0	8	,, Liberty, doz.	2	0
Ivy leaves, doz. bun. ...	1	6	0	,, Generals	1	6
Lilium Harrisii	2	0	3	Smilax, bunch	4	0
Lily of Valley, 12 bnchs	9	0	12	Stephanotis, doz.	2	0
Maidenhair Fern, doz.				Violets, doz. bun.	2	0
bnchs.	4	0	5	,, Marie Louise	2	0

Average Wholesale Prices.—Plants in Pots

Most of the undermentioned plants are sold in 48 and 32-sized pot

	s. d.	s. d.		s. d.	s. d.
Aralias, doz.	5	0 to 12 0	Geraniums, doz.	4	0 to 6 0
Araucaria, doz.	12	0 30 0	„ Ivy, doz.	6	0 8 0
Aspidistra, doz.	18	0 36 0	Grevilleas, 48's, doz. ...	5	0 0 0
Crotons, doz.	18	0 30 0	Heliotrope	6	0 8 0
Cyperus alternifolius			Hydrangeas, pink	10	0 12 0
doz.	4	0 5 0	„ white	10	0 12 0
Dracæna, var., doz.	12	0 30 0	Lycopodiums, doz.	3	0 0 0
„ viridis, doz.	9	0 18 0	Marguerite Daisy, doz. ...	6	0 9 0
Erica Cavendishi... ..	18	0 24 0	Myrtles, doz.	6	0 9 6
„ candidissima	18	0 21 0	Palms, in var., doz.	15	0 30 0
Ferns, var., doz.	4	0 18 0	„ specimens	21	0 63 0
„ small, 100... ..	10	0 16 0	Pandanus Veitchi, 48's,		
Ficus elastica, doz.	9	0 12 0	doz.	24	0 30 0
Foliage plants, var, each	1	0 5 0	Pelargoniums	8	0 0 0
Fuchsias, doz.	6	0 8 0	Shrubs, in pots	4	0 6 0



Preparing Land for Wheat.

Although more than two months must pass before the drilling and sowing of Wheat will commence, it is not too soon to begin preparation of the soil for the reception of the seed, and in certain contingencies it is highly desirable that no time be lost in setting about that preparation. A large though decreasing portion of our British Wheat crop is still grown after seeds under the old four-course system or modifications of it, and it is the preparation of this seed land which has a very great bearing on the success or failure of the crop. At one time Wheat was the most important crop on the farm, in fact the mainstay of the farmer in paying his rent and making a profit. In those days everything else was subordinated to the welfare of the Wheat, and it was quite a common thing to see large areas of sheep pasture ploughed up before harvest, so that the green sod could become decayed and the land properly solidified before it was time for the sower to go his round.

Wheat has not changed its character since then, and still delights in a firm rooting medium, whilst showing its dislike to green, grassy sod about its roots; and in seasons like the present one, when pastures have run away from the sheep and present almost the appearance of unmown hayfields, it is especially necessary to put in the plough early if the field is to be sown with Wheat. Wireworm is the great enemy of the young Wheat plant, and wireworm is invariably most numerous on land which has been allowed to grow tall vegetation, for the insect seeks such whereon to lay its eggs. If, therefore, we have a field of seeds which we wish to sow with Wheat, and which is full of long herbage, the sooner we start ploughing or using the cultivator the better. But, perhaps, we want the pasture for the sheep for a longer period! Well, there is the rub! Sheep are more important now than Wheat, and farmers make more use of their seeds.

Seeds are now very frequently kept down for two or three years, and if Wheat is to follow them with any chance of success it is imperative that the land be broken up with a cultivator before harvest, and the sod be well broken up. After harvest another cultivation, followed immediately by a thorough ploughing, will give the Wheat as good a chance as otherwise it might have a poor one.

Two and three year old seeds are invariably infested with wireworm, for there have been so many opportunities for the insect to deposit its eggs; but long, overgrown young seed pastures are often equally as bad and need the same treatment. It must be borne in mind that the early breaking up of seeds does not necessarily destroy the wireworm, but there is no doubt that it very greatly checks its activity and minimises its power for harm. Therefore, if we can spare our seeds and wish to have a full crop of Wheat we had better put in the plough or cultivator at once. For one-year seeds ploughing should be sufficient, for even if the herbage be rather tall it can be well buried in the furrow if a skim coulter be used effectively. For two or more year old seeds we strongly recommend the use of the cultivator, for there are other enemies to be found there as well as wireworms. Few pieces of old seeds are there which have not accumulated a certain, and too often an inconvenient amount of twitch, and it is highly desirable if Wheat is the intended crop that this twitch should have a good deal of the life knocked out of it before the Wheat is sown.

If the twitch be not scotched an attack of wireworm, thinning the Wheat plant, will give the twitch an opportunity which it is always ready to take, and when hoeing time comes the plough and not the hoe may be the implement needed.

If manure be plentiful and the Wheat crop considered important enough to have a dressing, it must be ploughed in with seeds, but on the majority of farms where the Wheat is still considered worthy of manuring, the fertiliser is applied early in the previous spring so as to benefit the pasturage as well as the following white crop. Of course, if this has been done, another dressing now would be sheer extravagance. If manure be spread on just before the plough it must be very well shaken out or broken up, or the difficulty of making a clean and thorough job will be materially increased, especially if the herbage be rank. The old type of plough is the best for ploughing lea, and on no account must the American chilled ploughs or diggers be used—they leave the land much too corky and light. If we do not plough with the old ploughs we had better use the cultivator and break up the surface, thoroughly leaving the disintegrated sod and twitch to the influence of sun and wind until the approach of seed time makes ploughing necessary.

Early ploughing not only gives the turf time to decay, but also gives the land a chance to attain that solidity which is so necessary to the formation of good and numerous roots. When lea is ploughed soon after midsummer it is not imperative to use the press or Cambridge rolls, as is the case when we are approaching Michaelmas; but it is advisable, nevertheless, and at this season we never have to wait long for an opportunity.

There is another reason for early ploughing this season in addition to the fact that we can spare the pasturage. The land is now in a moist condition for the time of year, and the ploughing could be well and easily done. With a dry August ploughing might be difficult or impossible in September. There is another point, viz., the depth we should plough. Not less than 5in we think. Land with less than 5in of soil is not suitable for Wheat.

Work on the Home Farm.

Barley is beginning to assume a tinge of gold, in fact we saw a field of winter Barley yesterday looking quite yellow. This makes farmers prepare for harvest, and we notice many reapers passing to the machine works, which we are fortunate to have close at hand. The proprietor of these works keeps a number of binders which he lets for hire. After harvest he has them all repaired, cleaned, and packed away, and he tries hard to induce farmers of the neighbourhood to do the same; but they prefer to keep them dirty and out of repair until the corn is nearly ripe, and then grumble when they cannot have the repairs done at a moment's notice. Such is human nature!

The week has been fine with a few heavy showers which have hindered belated haymakers, but have been grand for the roots. Turnip hoeing and cleaning is still the chief item of work, and such progress is being made as justifies us in the expectation that the Corn harvest will not find us unprepared for it. Certainly Turnip hoeing will be finished.

We hear of a commencement to market second early Potatoes, but the attempt was not encouraging. The tubers are small, and the weight per acre quite inadequate to give a paying return.

We see traction engines drawing small trains of road material into every parish. At one time the farmers did this work. Now the tenders asked for by the rural councils are all offered and filled by steam traction contractors. Horse power cannot compete with them, and the farmers have to pay instead of receiving; but the poor horses get a well earned rest at a time when they used to be carting heavy loads of stone, so the loss is not a clear one.

Wool is up again, and we hear of 17s. per tod being given. There is a great deal yet in farmers' hands, and we are glad they have succeeded in holding to good purpose.

There are many more store pigs offering than there has been for a long time, and we are evidently to have lower prices for a time. If, as seems likely, we have a scarcity of Potatoes and dearer Corn, there must be a slump in the pig trade.

Sheep are very healthy. We have weaned our lambs, and have them on the old pastures, which are full of good sound meat. We let the lambs have as much medicated lamb food as they will eat, which is nearly 3lb per head per day.

CHOICEST FLOWER SEEDS

FOR PRESENT SOWING.

Dicksons Superb PANSY, 1/-, 1/6, and 2/6 per packet.
 Giant and Gold-laced POLYANTHUS, each 1/- per packet.
 Mixed Alpine AURICULA, 1/- and 1/6 per packet.
 Extra Choice Stage AURICULA, 1/6 and 2/6 per packet.
 ANTIRRHINUM, 3d., 6d., 1/-, and 1/6 per packet.
 AQUILEGIAS, 3d., 6d., and 1/- per packet. [packet.
 CANTERBURY BELLS, double and single vars., 3d. & 6d.
 WALLFLOWERS, single and double vars., 6d. & 1/- packet.
 CINERARIAS, 1/6, 2/6, and 3/6 per packet.
 MYOSOTIS, 3d., 6d., and 1/- per packet.
 PRIMULAS, 1/6, 2/6, and 3/6 packet. VIOLAS, 1/- packet.

DICKSONS ROYAL SEED WAREHOUSE, CHESTER*For Present Planting.***ROSES**

ON THEIR OWN ROOTS.

Strong Plants in 5 inch Pots of leading Hybrid
 Perpetual, Hybrid Tea, Tea, and other Classes,
 10/6 to 18/- per dozen, 75/- to £6 per 100.

DESCRIPTIVE CATALOGUE FREE ON APPLICATION.

N.B.—Many of the choicer varieties can now be
 supplied which are not available on their own
 roots from the open ground in the autumn
 and winter.

WM. PAUL & SON
WALTHAM CROSS, HERTS.

The Royal Nurseries, Maidstone, Kent.

GEORGE BUNYARD & CO., Ltd.,

Are now Booking Orders for early delivery of the very best

NEW AND OLD STRAWBERRIES

In pots for forcing, or as runners for open culture, true to name.

They offer the Largest Stock and the Best Plants in the Trade.

REVISED CATALOGUE, including the New Perpetual Bearing Kinds, now ready, free.

CLIBRANS
CHOICE
FLOWER SEEDS

For Present and Autumn Sowing.

	PER PKT.
CLIBRANS SUPERB AQUILEGIA ..	0/6
CLIBRANS PRIZE CALCEOLARIA ..	1/6 & 2/6
CLIBRANS CANTERBURY BELLS ..	0/6
CLIBRANS CHOICEST CINERARIAS ..	1/6 & 2/6
CLIBRANS LOVELY DELPHINIUMS ..	0/6
CLIBRANS SELECTED DIGITALIS ..	0/6
CLIBRANS Superb Double HOLLYHOCK ..	1/0 & 2/6
CLIBRANS SELECTED MYOSOTIS ..	0/6
CLIBRANS LOVELY PANSIES ..	1/0
CLIBRANS CHOICEST PENTSTEMONS ..	0/6 & 1/0
CLIBRANS GRAND POLYANTHUS ..	1/0
CLIBRANS EAST LOTHIAN STOCKS ..	1/0
CLIBRANS SWEET WILLIAM ..	0/6
CLIBRANS CHOICE WALLFLOWER ..	0/6 & 1/0

Mixed, or in distinct colours and varieties.

*All other Seeds as per Catalogue.***ALTRINCHAM & MANCHESTER**BY SPECIAL
APPOINTMENTTO HIS MAJESTY
THE KING.**ORCHIDS—ORCHIDS**

QUANTITY IMMENSE.

Inspection of our Range of Houses

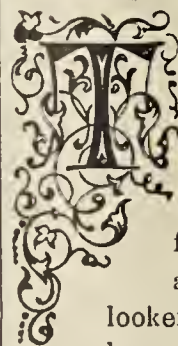
IS CORDIALLY INVITED BY

HUGH LOW & CO., BUSH HILL PARK,
MIDDLESEX.**LONDON FERN NURSERIES,**

LOUGHBORO' JUNCTION, LONDON, S.W.—Stove and Green-
 house Ferns, large and small, in var., Aralias, Grevilleas,
 Cyperus, Ficus, Ericas, Palms, Dracenas, Aspidistras, Roses,
 Azaleas, Carnations, Crotons, Camellias, Chrysanthemums,
 Cyclamen, Bouvardias, Asparagus, Araucarias, Solanums,
 Aspidistras, Cinerarias, Genistas, Marguerites, Geraniums,
 Primulas, Orange Trees, &c. Trade, send for Wholesale
 List. Special Retail Catalogue, free.—J. E. SMITH.

**Journal of Horticulture.**

THURSDAY, AUGUST 6, 1903.

Judges under Judgment.

HE referee at football, the umpire
 at cricket, and the judge at a
 flower show, are all persons who
 naturally expect to come in for
 a fair share of criticism, both
 from the persons most interested,
 and also from the partisan on-
 lookers. They are all expected to
 be absolutely infallible, and if they
 should happen to make a mistake, it is either
 put down to their total incapacity to act as a
 judge, or else to a deliberate act of gross
 favouritism. Concerning flower show judges a
 letter of complaint appeared in this journal
 some time ago having reference to persons who
 act as judges, and even tout round for engage-
 ments, but have no qualifications at all for the
 office. There might have been some ground
 for the complaint, perhaps there was, but with
 the exception of large shows judging fees are
 not plentiful nor high enough for men to seek
 engagements. On the other hand, it is gene-
 rally a case of men acting as judges purely to
 oblige the society that invites them, and it is
 for the committee of the latter to ascertain
 beforehand whether the persons who are asked
 to adjudicate are capable men or not.

Generally, I think a man's qualifications to
 act as a judge are gauged by the position he
 holds. For instance, there is a Mr. So-and-so,
 head gardener at a certain pretentious
 establishment; he is simply bombarded with
 invitations to judge at local flower shows, not
 because much is known about his adjudicating
 capacities, but because his position is accepted
 as a guarantee of the above. And sometimes
 Mr. Head Gardener at the big place gets a
 little puffed up by the compliments paid to
 him, and wants to do the judging himself while
 his one or two colleagues look on, or just drop
 the cards on the exhibits at the great man's
 suggestions. Of all things, save me from

READERS are requested to send notices of Gardening
 Appointments or Notes of Horticultural Interest,
 intimations of Meetings, Queries, and all Articles for
 Publication, officially to "THE EDITOR," at
 12, Mitre Court Chambers, Fleet Street,
 London, E.C., and to no other person and to no other
 address.

West's POWDERED Weed Killer.

Do not send any
 money, but a
 P.C. for a
FREE SAMPLE.

Before wasting money on worthless imitations, test a

FREE SAMPLE,

and yourself decide on its merits. It will cost you nothing, and prove to you that

Do not send any
 money, but a
 P.C. for a
FREE SAMPLE.

Plants protect,
 Money Save,
 AND
 Labour Ease.

WEST'S PATENT GARDEN SUNDRIES

CATALOGUE, containing 50 large pages, with 100 Illustrations, with Hints on Horticulture, post free. No Trade Terms possible off these low prices.

Buy from the Manufacturer of all Horticultural Sundries—

C. E. WEST, ROUNDHAY,OR DIRECT FROM THE
WORKS,**HIGHAM HILL,**

NO AGENTS.

(SUFFICIENT ADDRESSES).

LONDON N.E.

judging with the man who wants to have things all his own way, and tells you that "we must go there for first" and "come here for second" without stopping to consider whether you have an opinion at all. Just note his look of withering scorn if you happen to disagree with one of his ready-made decisions, and if, when he has taken the trouble to point out your ignorance to his own satisfaction, you still remain unconvinced and will not give way, then his scorn gives way to an expression of profound pity, both for you and also the misguided society that asked you to judge along with such a person as himself.

A much more amiable person, but still not an ideal judge, is the individual who really has no settled opinion of his own, but is possessed with an overwhelming anxiety to please everybody. Of course he doesn't succeed; but as a rule he does no great amount of harm, and when asked to take the initiative in making an award to a plate of Potatoes he coughs and hesitates, strokes his chin, turns over the tubers again and again, bends over the table and looks closely at them, then surveys them at a distance, and comes eventually to the conclusion that he is rather in favour of this dish, but of course if his colleagues prefer any other for the first prize he is quite prepared to give way. This is the kind of man who shines better at the luncheon than at the actual judging. He is possessed of a nice little set speech, which he delivers on all occasions in the same amiable way, and tells the officials what a splendid show it is, how excellent the arrangements are, how honoured he feels at being privileged to officiate under such circumstances, how pleased he shall be to come again, and so on, and so on. Taken altogether, he is a nice sort of fellow, is the ultra-amiable judge, and when quite relieved about the right thing being done in all instances, he walks round the show and receives the congratulations of the prizewinning exhibitors with the full satisfaction of a man who has fearlessly done his duty.

On one occasion I remember having a colleague of this type, and from the outset to the finish we got on swimmingly together, but when it was all over and my friend was looking round the tent, an unforeseen incident occurred. As is usual on such occasions, one exhibitor was dissatisfied with a decision we had made, and when he buttonholed the amiable judge and pointed out what he considered to be an injustice to himself, in language more forcible than elegant, I happened to be on the outside, and there was only a thin wall of canvas between us. Consequently I overheard the remarks of my colleague, which were something to this effect: "Yes, yes, quite so; I see; you're right; that was my contention all along, and you would have had the prize if it hadn't been for that other fellow." I didn't stop to hear any more as my train was due.

It is an open question whether there should be two or three opinions in making the awards at shows. As a rule, a couple of judges for any one division is sufficient, in spite of the contention that three heads may be better than two, and a good deal of time is saved that otherwise is spent in useless argument. I have no objection to acting with two others, so long as I am on fairly good terms with one of them, but if the other two are in coalition then you are the odd man out, so to speak, and the actual part you play in making the awards does not amount to very much. It is true that two judges may fail to agree, but the difficulty is easily overcome by calling in a third opinion to settle the point; that is to say, if the third party's decision is accepted without comment. If, however, you happen to be the third party, and each of the disputing judges, instead of waiting for your opinion, commences by argument to prove that he is right, then things are not altogether so easy, especially if the man whom you eventually disagree with twits you on your ignorance afterwards.

In spite of the judging rules formulated by the Royal Horticultural Society, and the reams of copy that have been written on the subject, the question of size v. quality in show vegetables remains unsettled, and exhibitors are often non-plussed in consequence. There are judges, however, who have settled the matter for themselves, and when a man glances at the schedule and observes, "This is a cottager's class, we must consider size," you may depend that if he has his own way the prize cards will fall on the biggest specimens on the board. By another rule, the same individual has his own idea as to what is best for a gentleman's table, and when adjudicating in the professional division it is the smallest produce that finds favour with him. In the way of judges, exhibitors sometimes pride

themselves on knowing their men, and once when I remonstrated with a man for boarding some large coarse vegetables, he gave me a knowing wink and observed, "I know my men, you see the judges go for size here." As it happened, however, the judges were changed on that occasion, likewise the opinions, and the exhibitor who knew all about it was intensely disgusted to find himself thrown out entirely.

There is a good deal of character displayed at a flower show, particularly when the judges are being judged after the awards are all made. You are probably acquainted with the man who never exhibits, nor ever grew anything worth exhibiting, but still he always goes round to see if the judges have done the right thing, and if he is able to congratulate them on this in all cases they may consider themselves as being perfectly competent. Again, there is the man who is never satisfied unless he gets a prize for everything he shows, and is prepared to raise an objection against a fellow exhibitor for staging twenty-nine Gooseberries when he ought to have thirty on his plate. Over the bar in the refreshment booth this man disperses judgment on the judges pretty severely, and as he passes out of the show at night with a rejected member of the Cucurbita family under his arm, observes in a disgusted tone, "Marrer! what do they know about a Marrer?" and you have his candid opinion of the judges on that occasion.

Still the flower shows continue, and the judging is performed next year much about in the old way. Dissatisfied spirits sometimes drop out, but as a rule they forget their grievances and come up smiling at the next show, when the decisions of the judges are judged over again. In the meantime articles are written describing right and wrong ways, and the usual paragraphs appear enlarging upon the incapacity of judges, though none of the latter take them in a personal sense, so they do neither good nor harm. Judges do not seem to alter much, and as a body act honestly and according to their lights, and if they go home quite unconscious of the kind and unkind things said about them by those who claim the privilege of sitting in private judgment over their decisions, it is just as well for their peace of mind that it is so.—JUDEX.

Testing Seeds.

Seeds may fail to germinate from a variety of causes, even when exposed to the proper degree of warmth, moisture, and oxygen. They may be too old, they may not have been sufficiently mature when gathered, they may have become too dry, they may have been subjected to freezing before sufficiently dry, they may have been stored when damp and thus subjected to undue heating, or they may have been damaged by insects or fungi either before or after maturity. It is unnecessary to plant seeds in soil to test them, since the seed tester is much more convenient. This useful device consists of two circular pieces of clean, moderately thick cloth of rather loose texture, a table plate that is not warped, and a pane of glass large enough to cover the plate. The cloths are dipped in water and squeezed a few times while under the water to press out the air. They are then wrung out until moderately wet, spread over the bottom of the plate, and the seeds to be tested are placed between them. It is well to use a hundred or more seeds of each sample, as a larger number will show the per cent. of vitality more accurately than a smaller one, and the lot should always be well mixed before taking the sample. The plate should be kept covered with the glass to prevent evaporation from the cloths, and it may be placed in any room of comfortable living temperature. The seeds should be frequently examined, and may be removed as they sprout, when by subtracting the number that fail to sprout from the number put in, the percentage of vitality may be readily computed. The cloths should be placed in boiling water a few minutes before using them for a second test to destroy any spores.

Attar of Roses.

The increasing prosperity of the attar of Rose industry is shown by the fact that in eight years the area under cultivation has nearly doubled, having reached the figure of 13,700 acres. Last year's crop was expected to be one of the largest on record, but a week of scorching winds reduced the yield by a quarter. The damage done to the quality of the Roses is shown by the fact that 360lb of flowers were required to produce one ounce of attar, or twice the usual quantity. The yield totalled about 75,000oz, as compared with 135,000oz in 1900. Last year's crop is estimated at 25,000,000lb of Rose flowers.



Cypripedium leucorrhodum.

This is one of the many hybrids of Messrs. James Veitch and Sons, of Chelsea. It first flowered in 1885, but the cross had been effected some ten years before, between *C. longifolium* Hartwegi (Roezl) and *C. Sehlimi albiflorum*. It is thus described in Messrs. Veitch's "Manual of Orchidaceous Plants": Upper sepal white tinted with pale rose in the basal area; lower sepal wholly white; petals spreading, white at the base and on each side of the median vein, pale rose at the margins and apex; lip pale rose pink suffused with pink, the infolded lobes ivory white. Staminode ivory white fringed with purple hairs at the back.

The Week's Cultural Notes.

Vanda Sanderiana is one of the most beautiful of the single stemmed distichous leaved section of Orchids, and it is really much more easily grown than it appears, and there is no reason why the tyro in the art should not take up its culture. Where many growers have gone wrong with it in the past is in keeping it constantly in sweltering heat and moisture, and not paying proper attention to consolidating the tissues in autumn and resting it in winter.

Rest, as applied to Orchids, is an elastic term. A *Phalænopsis* rests in a temperature and atmosphere that would keep tropical *Dendrobiums* in constant growth, while the latter, if properly rested, are treated in a manner that would be fatal to the former. *Vanda Sanderiana* should be placed during winter in a temperature similar to that of the *Cattleya* house, and should be prepared for this lowering of the temperature by careful treatment now. Coming as it does from one or more of the Philippine Islands sun heat is absolutely necessary to its well being, and every ray of light should be admitted to it, short only of scorching the foliage. Being less sensitive than *Phalænopsis* this can easily be arranged, and the foliage will soon take on that hard, leathery texture, and feel that augurs well for continued health and free flowering.

The roots will need very frequent moistening if they are, as they always ought to be, growing close together in smallish baskets or other receptacles. Like *V. cærulea*, it never appears to be so happy as when its roots are fighting for a place, growing over and over each other, and through the rods of the basket to the congenial air of the Orchid house. Growers who are not happy without pulling the roots of their Orchids about continually should keep this fact in mind.

The showy Moth *Dendrobium*, *D. Phalænopsis*, is now growing very strong, and if it is to be a success must be rushed on, so to speak, to its flowering. Right up to the glass in a light house with a tropical temperature is its place, and the colour of the blossoms will be finer, and the spikes stronger in consequence. Its companions in position and treatment, such as *D. bigibbum*, *D. strebloceras*, *D. Goldiei*, *D. superbiens*, *D. Johnsoni*, or *Maefarlanei*, and others from Australasia, form a very fine group, flowering after the last of the ordinary members of the genus are past. All should grow a few of them, for there is nothing so showy and yet refined in the great Orchid family at the comparatively dull period when they flower.—H. R. R.

Cactus Dahlias.

Dahlias should now be growing rapidly and will need a good deal of time spent in thinning and tying. Where possible a good coat of rough stable manure should be spread over the entire ground. In doing this, shake out the short and place it round near the plants, and over this spread the rough, to form a sort of barrier to the birds, which delight in scratching it in every direction but where it ought to be. Where fine blooms are wanted the plants will require feeding if at all dry at the root, and this should be done in a thorough manner. Sheep, horse, cow or chicken manure are all good things for the Dahlia. A tub holding about forty gallons of water should be filled, a good mixture made, and not less than two gallons given to each plant at one time. It is useless to give a little at a time, as it does not soak down to the roots, but if the above quantity is given, the ground is well moistened underneath where the root fibres are at work. This should be repeated as often as dry, and usually in ordinary dry weather twice a week will be sufficient.

All weakly growth must be cut out, especially that which runs up spindly in the centre of the plants, and a few, but not many, of the large leaves cut out as well. The amount which should be removed from each plant of course varies very considerably with the different varieties, some of spare upright growth needing hardly any, while another of a bushy nature will want to be thinned continually if the finest blooms are looked for. Strong, young growth from the bottom parts of the plant should be carefully tied up, as fine blooms usually come from them after the first and finest flowers on the main wood are over. Disbudding must be practised more or less. Some of the enthusiastic amateurs now grow Cactus Dahlias on almost the same principle as a *Chrysanthemum* for large flowers; that is, when they get the buds fairly showing on the main stems. They clear off everything in the way of shoots right down to



Cypripedium leucorrhodum.

the bottom. This, of course, is wrong, as the plants, apart from not producing a tithe of the flowers they ought, often become stagnant and do not throw half such fine blooms as plants which are in a healthy growing state with enough growth to stimulate root action, but not enough to overstrain the plants. As a rule the two side buds, and two to three joints down, is enough to disbud a stem, and then the lower shoots should come away strong and flower well later, although they will need a few of them cut out, or the whole plant will be too thick.

It is very necessary to tie the plants continually, as being so succulent and growing rapidly they have a habit of being in a loose state whenever the wind freshens a little, and it is no easy matter to get a plant back into shape once it gets blown about, and in tying always aim at so securing the branches that they will not break, but yet give to the wind, more or less. It is almost impossible to resist the wind as a wall does, but by carefully looping up each branch they will turn with the wind and spring back again unhurt. Earwigs and caterpillars must be hunted in the evening, or many fine flowers will be lost. After a short time their number becomes less and less if the blooms are looked round every night and the marauders picked off. Warm, dewy evenings are the best for sport in this direction.—D.



Gooseberries and Currants as Standards.

For the benefit of the uninitiated, it may be stated at the outset that these trees are on clean straight stems from two to four feet high, Gooseberries being budded or grafted on stems of some member of the same genus, usually *Ribes aureum*—the Gooseberry being *Ribes grossularia*—while Currants are reared on their own stems. It is surprising how seldom trees of this sort are met with, as some of the leading nurserymen list them in their catalogues. They are as much trouble to rear as trained Apple and Pear trees, and thus, though the price is usually at least 2s. 6d. for a tree with quite a small head, no doubt from the nurseryman's point of view they are quite worth it. As, however, most people will hesitate at giving so much for Currant and Gooseberry trees, it may be both useful and interesting to describe the method of raising them, which though a somewhat long process, is nevertheless interesting from the very start till a really presentable tree is obtained. Of course it is only Red and White Currants which are grown in this way, Black doing much better as bushes, with a constant supply of new shoots from the ground.

The start is made by taking cuttings of the sorts desired, whether of Red or White Currants, or of *Ribes aureum*, for grafting or budding with the Gooseberry. They should be straight and strong well-ripened pieces of young wood from one to two feet in length, preferably fifteen to eighteen inches, taken, if possible, with just a small piece of the old wood attached, termed a heel. All the buds on the lower six or eight inches of the stem should be removed to preclude the possibility of all suckers arising from the roots in after years, which is the curse of badly grown trees. The best time to take the cuttings is the end of October or beginning of November, or as soon as the leaves are off. They should be put into a sandy soil, about six inches deep and about six inches apart in the rows, the soil being pressed down firmly round them, as cuttings of all sorts root more readily in a firm soil than in a loose one. Care must be taken not to break off the top buds, as a good strong leader is wanted from the terminal one, or, if there are several, from the central one.

In the spring tall sticks should be put to each cutting, and the leading shoot tied up to it as it extends, the side shoots from the cuttings being pinched back to two leaves as soon as they are fairly well developed, and the resulting growths to one leaf. The result of this is that the stems of the cuttings are clothed with leaves from near the ground to the top, which helps the stems to thicken, and stimulates root action, the added strength being sent into the leader when the laterals are pinched. In the autumn the leader should be shortened to about two-thirds of its length to ensure a strong continuation in the following spring, the cut being made just above a strong bud; in fact, the cut should be begun just below the bud, and on the opposite side to it, and, going upwards, finish just above it. The continuation shoot in the spring will be almost exactly in a straight line with the stem, and after a year's, or two years', growth the starting point will be only noticeable when looked for. The laterals should be treated in the same way as during the first year, both from the first year's growth and from the stopped laterals of that year.

When the leader has attained the height of about four feet, if Gooseberries are the objective, buds may be inserted some little way down from the top at the end of July or beginning of August, preferably in damp weather, or if grafting is decided on, the leader should not be shortened till the following March. If Currant trees are to be reared, the leader may be shortened six inches or so in the autumn, when three or four shoots will push forth in the spring to form the head of the tree. Any one of these shoots which is badly placed for forming a future branch, or threatens to grow in an awkward direction, should be removed completely before it gets woody, while the remainder may in

the autumn be cut back to half their length, which will mean that the branches will be doubled in number the following spring. The trees will be by this time three or four years old, and all the lateral growths of the stem may be removed, being cut off close to the stem with a clean cut.

We have now a standard tree, and from this point the training of the head is pretty much the same as that of any ordinary Red Currant or Gooseberry bush. Extension of a branch in any desired direction can be obtained by cutting back the leading shoot of that branch to a bud pointing in that direction. In May, any lateral growths for which there will not be room should be pinched back to three or four leaves, and the secondary growths to one leaf, to keep the middle of the tree from getting crowded, and in the autumn these should be further shortened to the clusters of buds at the base, and thus will be formed fruiting spurs for years to come. The ideal tree has every branch clothed with these, so that every branch is, in fact, a well-feathered cordon. Until the branches have attained nearly the desired length, the leading shoots may be left about half their length, or less, at the autumn pruning, which will ensure the formation of spurs along their whole length. If more is left than this some of the buds will not break in the spring, and a bare or spurless stem will be the consequence.

When the trees are getting nearly as large as desired, they may be shortened every year to two or three leaves. There is an alternative method, or, rather, perhaps a variation of this method, for Gooseberry standards when they have attained a fair size, and that is to allow half the leading shoots to remain their full length each year, as the young wood of Gooseberries often bears the finest fruit. These at the end of the season can be cut back, and their place taken by strong leaders from the young wood which was cut back the previous season. Birds in winter will sometimes nullify the good of the most skilled training by picking out the buds, and when these buds are the embryo spurs of future years it is very annoying and disappointing. A look out must be kept for this, and at first sign the trees should be dusted over with soot on a still, damp morning, and the operation repeated two or three times during the winter, especially after very heavy rains. Another matter to be looked to is the staking of the trees. This is generally necessary for some years, and if well done when the stem begins to carry a head, when, in fact, it is planted in its permanent quarters, it will probably last as long as wanted. But the grower must be guided by circumstances, as so much depends upon the height of the stem, and the vigour with which it was grown.

As regards sorts, the Red Dutch is one of the best for standard Red Currants, being a compact grower and a great bearer, large and deep red, and of good flavour. Raby Castle has also much to recommend it for this purpose, as its stout growth makes it especially suitable for forming a good strong stem, while its late keeping properties give it a special value, the fruit hanging on the trees until October without any difficulty if birds are kept off, and is then very refreshing for dessert. Of White Currants, the only variety needed is the White Dutch Cut-leaved, a moderate grower and abundant bearer, producing large bunches of fine berries, being an improvement upon the old White Dutch.

As regards Gooseberries, it does not matter much which sorts are chosen as regards habit of growth, though it should be borne in mind that there are two very diverse classes of Gooseberry in this respect—the pendulous, like Red Warrington and Keepsake, and the upright, like Red Champagne and Whinham's Industry—the former class producing a weeping sort of tree, by no means unornamental, and the latter a sturdy, erect-branched sort of tree, especially the two sorts named. In ordering trees from the nurserymen it will avoid disappointment to know that they do not stock standards of very many varieties, and it would be well, therefore, to give them considerable latitude.

Though the idea of standard Gooseberries and Currants may seem fanciful to many, they have at least one very distinct and definite use to which bushes cannot be put, and that is, that, by planting them alternately with bushes, more fruit can be grown on a given space. Everyone knows that Red Currants in garden ground tend to make a deal too much wood, but by having standard trees between them there is so much more demand upon the nitrogen of the soil—the sole cause of rankness of growth—that this luxuriance is checked, while their bearing will not be lessened, but rather increased, what little they suffer from the slight

shade of the standard being more than compensated for by the diminution of a rampancy, especially if the trees receive a dressing, as all fruit trees should do, of phosphate in some form every year, say basic slag at the rate of five pounds to the forty square yards.

This arrangement of trees is better for Currants than for Gooseberries—the latter rarely suffering from excessive richness of soil—and is best for trees in a row as distinct from a plantation, where there is presumably vegetable ground on one side. If carried out in a plantation it is obvious the standards—if they were alternate with the bushes in every row—would make too much shade. Red and White Currants may really be objects of beauty in this form, as the fruit hanging from the under side of the branches is so well seen, instead of being hidden, as is usual, with Currant bushes. If birds become troublesome a net is very easily thrown over the tree and just tied round the stem. With Gooseberries there is the further advantage of ease and comfort in picking the fruit, which is kept quite clean, and tends to develop a finer flavour by reason of the greater amount of air it gets. The latter consideration applies to Currants also. Still, when all has been said that can be said in favour of standard Gooseberries and Currants, one of the chief inducements to grow some trees in this form is the liking for change and variety in the garden, with the added element, to many of our friends, of novelty.—ALGAR PETTS.

Scabiosa caucasica : Its Cultivation and Varieties.

Although the Caucasian Scabious, or Pincushion Flower, is said to have been in cultivation since 1803, it seems no time to those of us who have long been interested in hardy flowers since it began to appear prominently in catalogues of such plants. For some time, it is true, it has been a favourite plant with exhibitors and others, but it rose rapidly in estimation soon after it was "boomed" by a well-known hardy plant firm, and it then found its way quickly into gardens. Yet it is safe to say that it fails to give satisfaction in many gardens, either from want of hardiness, or rather, I should prefer to say, from lack of resisting power in certain gardens and districts, as well as from a defect it shows in some gardens—the non-development of some of its "petals," with the result of flowers without symmetry.

That it is a resister of cold is evident to those who have seen it doing for years in cold localities where frosts are severe, but those who have the widest acquaintance with it will be the readiest to say that it is not absolutely to be depended upon in every garden, as it will frequently succumb in some seasons, and may even require to be treated as a biennial. Its natural habitat is said to be dry and arid, and if this is the case it is not difficult to see that it is liable to loss from the excessive moisture, accompanied by a cold heavy soil, which are the only conditions under which it can be cultivated in some gardens. Yet, on the other hand, it seems to be often in dry and warm gardens that the Caucasian Scabious comes with imperfect heads of flower, and it would be interesting to know if this occurs in its native habitats. To be strictly correct, I should perhaps say that the defect really arises from the non-development of some of the flowers which form the outer range of the disk of the bloom, which is, of course, composed of a number of flowers, for the Scabious belongs to the natural order Dipsacæ. Although the Caucasian Scabious occupies arid situations at home, to grow it well so as to produce large and finely coloured heads it prefers a good and well-manured soil, with a fair amount of moisture in summer, but with little in winter. The best plants I have seen were growing near Edinburgh in good loam; and here I may remark, these had been seedlings, being better and more vigorous than plants propagated by division, though they vary in colour more than one may sometimes desire.

It is to this variation when grown from seeds that we owe the varieties of the flower. The type is almost a pale blue, with a tinge of lilac, but there are forms with pure white and creamy white flowers, and others drawing nearer to the hue of the type. It is, I find, desirable for the purchaser to see the plants when in bloom in case they are seedlings. He may then select the best colours he can see, and he has also an opportunity of seeing the best habited and most floriferous plants. The Scabious is very readily raised from seeds, sown either in a frame or in pans in a cold house, the young plants being pricked off when large enough before being planted out in the reserve garden. I have never met with self-sown plants. Recently several new varieties have been offered for sale, probably the best of these being one called *fimbriata*, which has several rows of "petals" which are fimbriated, and give the flower a neat and graceful appearance.

Some, however, would prefer the more formal flowers of that named *perfecta*, which is nearly semi-double, and has capitally formed blooms of a deeper lavender blue. Like all the forms of *S. caucasica*, these make very ornamental border flowers, while their blooms are much prized for cutting purposes, the long stems on which the solitary flowers are produced making them very well adapted for arrangement. Some consider the finely coloured and more robust growing *S. amœna* only a variety of *S. caucasica*, but it is recognised by leading authorities as a distinct species. It is equally worthy of a place in the garden. With all its defects and its own ways in some gardens, *Scabiosa caucasica* is one of the best and most distinct of our hardy flowers.—S. ARNOTT.

Cabbages Infested with Grubs.

The plants, judging from the description sent by "N. H. S.," are evidently affected by the larvæ of the Cabbage fly (*Anthomyia brassicæ*), though the root fly (*A. radicum*) and the Radish fly (*A. floralis*) larvæ also attack the roots and root stems of the Brassicas. The larvæ, commonly called maggots, which they really are, being legless, injure the plants by eating passages in the stem and roots, sometimes destroying the whole of the Cabbage crop in gardens and fields. They are also injurious to Turnips. The Cabbage and Turnip maggots are to be found in dung, as well as at the roots of the plants, and in particularly bad attacks are often connected with planting or drilling on a supply of stable or farmyard manure, especially when this was in a new, rank state. Indeed, maggot in the Cabbage or Brassica tribe crop is most prevalent on land that has been heavily manured, not perhaps for the particular crop, but from successive and frequent heavy manuring. To grow Cabbage and Cauliflower well without a good supply of manure, or land in good heart, is scarcely feasible; but the dressings should be of thoroughly decayed manure, and these, accompanied with occasional dressings of lime. Gas lime, fresh from gasworks, is unquestionably the best and most practical cure for the maggot tribe that infest Cauliflowers, Cabbages, Brussels Sprouts, Broccoli, and the Cabbage tribe generally. It should be applied in the autumn, or when the ground is clear of crops, at the rate of $\frac{1}{2}$ cwt per rod, 4 tons per acre, spread evenly on the surface, and left there a month or six weeks before being dug or ploughed in, and at least a similar time should elapse before the ground is cropped.

The gas lime must not be used over the roots of fruit trees, for which reason it is often needful to avoid its use in gardens, or only use it in the open vegetable quarters, so as not to prejudice the roots of bush or other fruit trees; hence dressing with freshly burned lime is resorted to. In the case of very foul ground 1 cwt per rod, 8 tons per acre, may be used. Stone lime is the strongest and best for such purpose, placing in small heaps convenient for spreading, covering with a little soil, and when fallen spreading, or slake with the smallest amount of water necessary to cause it to fall into an apparently fine dry powder, spreading while hot evenly on the ground, and as soon as convenient digging in. Autumn is the best time for applying the lime, always when the ground is clear, and some time in advance of cropping, choosing, if possible, a dry time for applying the lime and working the land, as this in a very wet time is prejudicial to the soil staple. In not very bad cases half the quantity of gas lime or of stone lime may be used, and the use of new or rank manure should be avoided.

As regards treating existing plants that are attacked by the maggots, easily known by their dull lead colour, and by the leaves drooping or flagging in the heat of the day, watering with lime water is useful, the hot lime being soaked for twenty-four hours in water, and the clear lime water used in the afternoon. Dilute the ammoniacal liquor of the gasworks with five times its bulk of water, and with the diluted liquor water the plants, keeping the liquid from the leaves. This liquor is also useful for watering Carrots affected with Carrot fly (*Psila rosæ*) grub, though really a maggot, the diluted liquor being poured between rows, not distributed over the tops of the plants. Watering with a solution of Little's soluble phenyle, 1 fluid oz to 3 gals of water, is also a cure for Carrot "rust," a term applied to the peculiar reddish or rusty colour to which the gnawed parts turn. You cannot do better than follow your neighbour's plan of watering the Carrot bed with diluted gas liquor.

For the Cabbages and Cauliflowers use at seed or planting time a mixture of three parts superphosphate and two parts bonemeal, $3\frac{1}{2}$ lb per rod, or 5 cwt per acre, and top-dress. After singling out, or when the plants have got well hold of the soil, use a mixture of three parts salt and two parts nitrate of soda, using $3\frac{1}{2}$ lb of the mixture per rod, or 5 cwt per acre, applying when the plants are dry, but the ground moist, and keep the mixture from the heart of the plants.



Back to the Land.

Although I am convinced that this subject has a peculiar fascination for hosts of Journal readers, I should not have ventured to enter the arena again but for the recent remarks of "D. C.," who not only asserts that small holdings do not pay, but is also trying hard to convince us that it is extremely undesirable to attempt to increase their numbers. "D. C.'s" methods of argument are, however, not likely to appeal very strongly to practical men, because they savour too much of the "dreamy academical faddist" instead of being based on actual facts as we see them before us to-day. "D. C." has been asked to explain why the nationalisation of the land "would, if practically applied, lead to national suicide." At the outset he is obliged to admit that he cannot do so, but instead advances visionary forebodings conjured up in his inventive brain. I shall certainly not attempt to copy "D. C." in this respect, but will endeavour, as far as possible, to write of facts as they appear before us all, and from which fair deduction may be made.

Do Small Holdings Pay? The emphatic answer to give to that is that in districts where they have been given a fair trial, it is found that they do, and the demand for them increases each year. "Owner and Tenant" has already shown us how they are increasing in the Evesham district, and how the rental value of the land has also increased. In Lincolnshire the demand for small holdings is so great that the county council is taking up a large area of land to supply the demand. In some districts where such holdings have been a failure, the cause may be traced to a lack of ready money to tide over a difficult time; but when co-operative credit banks have been formed in connection with them, success has been almost, if not quite, universal.

"D. C." next raises the question as to whether or not we are more prosperous as a nation, while we allow a large portion of the land to remain derelict, than we should be if it were fully cultivated, and less labour was therefore available for manufacturing purposes. Well, for the sake of argument I will admit that the aggregate wealth of the nation has been more largely increased by neglecting the land, and paying great attention to manufactures, than it could have been by following the opposite course. *But*—and an important *but* it is—the increase of wealth has gone principally to the capitalist, the workers have not benefited to the extent they should have done, as the higher wages of towns have been absorbed in the extra cost of living and keeping up appearances. This is, however, not the worst phase of the question. The miserable conditions under which many of the workers in large towns exist, are such as to make the lot of small holders in the country infinitely better by comparison. Hitherto, we have been drawing upon the country to supply the workers of the towns, but when the supply fails—and it is already failing fast—what will be the condition of Britons? Why, we shall be a nation of degenerates, then good-bye to our country's supremacy. That is the serious problem which confronts us at the present time. We do not want to become a nation of small holders—in fact, if we did there is not enough land to "go round"—but we do want a fair percentage of the people to follow rural pursuits, if for nothing else than to maintain the stamina of the nation, and there are hosts of silent, uncomplaining plodders in large cities, who, to-day, would be leading far happier, healthier lives if in their younger days they had not left the country—or their parents had not done so. Easy facilities for acquiring land, backed up by co-operation among small holders will do more than anything else to give a fresh impetus to country life. It is a matter which vitally affects our continued prosperity as a nation, and the nation ought to be prepared to make some, and if necessary, a great sacrifice to deal with it in a satisfactory manner.

When comparing the wages—or profits—obtained from country pursuits we are too much inclined to consider the amount of income alone, instead of in conjunction with the really necessary expenditure. It is not so much what an individual *earns* as what he or she *spends* which determines their condition in regard to prosperity. In towns the necessary expenses are great, then there are others which might be termed luxuries; but which are really necessities, because everybody indulges in them for the sake of appearances. In the country such useless luxuries are as a rule dispensed with, and therefore the majority are happy and contented without them. If then, by cultivating a larger portion of our land we reduced the quantities of manufactured goods sold to other nations, we should also greatly lessen the amount we now pay them for useless luxuries. Those who are fairly prosperous while leading a country life are generally so much attached to their par-

ticular calling that they would scarcely care to change with anyone, certainly not with those having a princely income if compelled to reside in town to obtain it. The prosperous countryman realises that in rural life rest and ever changing sources of happiness are open to him, and that the intelligent individual can enjoy each day to the full, much more so than can the town dweller whose one great and devouring passion is to amass wealth, and infinitely more so than the city toiler can, whose home appears still more dismal by comparison with the splendours around.—H. D.

Gold Medallist in Horticulture.

I think that "Inquirer," not having received an answer to his inquiries as to the horticultural qualifications of the advertiser who advertises himself as a gold medallist in horticulture on advertisement boards at Snow Hill, Birmingham, and other stations on the Great Western Railway, may safely take it for granted that he has no qualifications whatever, at least not of that quantity and quality gold medallists in horticulture are generally supposed to possess. A gold medallist in horticulture, as understood by horticulturists in general, is a person who has successfully passed a severe examination in botany, chemistry, or horticulture, or otherwise in practice has proved himself to be an expert in the art and practice of horticulture in general. To be the recipient of a small gold medal for an honorary exhibit of easily grown common hardy herbaceous flowers, and then to announce oneself as a gold medallist in horticulture is certainly a very flowery and exaggerated way of proclaiming it to the public. It is astonishing how some men can float on puff and blubber; how they announce themselves as lecturers in horticulture, and even assume and offer themselves as judges at horticultural exhibitions, when at the same time they have never grown fruit, vegetables, or greenhouse flowers in their lives; but if practical gardeners, especially near the Midland metropolis, would only decline to act with such men, and exhibitors would decline to accept their decision, we should soon see an end of bogus judges and lecturers. However, I do hope that after this correspondence the individual referred to by "Inquirer" will have the courage to qualify his claim as a gold medallist, otherwise I think the readers of the *Journal of Horticulture* may safely conclude that, as generally understood, he has no claim at all. If he has not the courage or the material wherewith to defend himself, perhaps someone amongst his friends will unsheath the sword in his defence.—ONE WHO WOULD LIKE TO KNOW.

Germination of Seeds.

On looking over some old newspaper cuttings I came across the following article, written before my time, and if there are readers of the Journal who can remember it, or others who can express their opinions on the subject, I feel sure their statements would be received with a great amount of pleasure.

Some curious and all but forgotten experiments of much interest to agriculture and gardening have lately been revived by a German savant. Very many years ago it was discovered, and recorded that water saturated with camphor had a remarkable influence upon the germination of seeds. Like many another useful hint, the stupid world took no notice of this intimation, but a Berlin professor came across the record of it, and he appears to have established the fact that a solution of camphor stimulates vegetables as alcohol does animals. He took seeds in various sorts of pulse, some of the samples being three or four years old, and therefore possessing a very slight degree of vitality. He divided these parcels, placing one moiety of them between sheets of blotting paper simply wetted, and the other under strictly similar conditions between sheets soaked in the camphorated water. In many cases the seeds did not swell at all under the influence of the simple moisture, but in every case they germinated where they were subjected to the camphor solution. The experiment was extended to different kinds of garden seeds, old and new, and always with the same result of showing a singular awakening of dormant vitalism and a wonderful quickening of growth. It also appears from the professor's researches that the young plants thus set shooting continued to increase with a vigour and vivacity much beyond that of those which were not so treated. On the other hand, when pounded camphor was mixed with the soil it appeared to exercise rather a bad effect upon seeds. The dose in this latter case was possibly too strong.

At all events there is here a line of inquiry well worth following up by seedsmen and gardeners, and even farmers might try how far Wheat and Barley would profit from the strange property, which seems to be possessed by this drug over the latent life of vegetable germs.—R. P. R.



South American Cotton.

An attempt is being made in South America to grow cotton on a large scale, and ultimately to enter the markets of the world. The cotton grown there now is of different variety from that grown in North America. It grows on a very tall bush, almost as large as a small tree, and lasts in its production from seven to ten years. The seeds are very difficult to separate from the fibre, because they stick firmly to it. It is also difficult to pick, and rain and frost are said to turn it yellow.

The Pope's Knowledge.

Leo XIII. was devoted to gardening. On one occasion he summoned his gardener and complained about some Ivy which appeared in a pitiable condition. "Why did you let this plant die?" the Pope asked. "The soil is so bad." "You do not know what you are talking about, or else you think that we believe everything you may be pleased to tell us." Then, says "The Tatler," followed a regular lecture, which made the mortified gardener exclaim when the Pope had departed: "He can teach everyone, from the cardinals to his own gardener; you can't get over him." The late Pope's knowledge was almost as encyclopædic as Mr. Gladstone's, but the recluse had naturally much fewer opportunities for displaying it than the great Liberal statesman had.

Bare Orchards.

Past is St. Swithin's, and the Apples are justly supposed to have been duly christened; but it is many years since growers visiting their orchards have seen so little fruit. The keen frosts this spring made havoc with the large proportion of Apple buds that had loosened their winter garments, while where the trees were very robust, and the bloom was not killed, the rain that succeeded the frosts was so cold and heavy that the bees were unable to carry out their part of the work of fertilisation, or the wind to blow, or the birds to sufficiently shake, when alighting on the branches, the pollen from bloom to bloom by reason of the excessive moisture, so that nearly all the table and culinary varieties failed to fruit at all. It was hoped that the late trees would have fared better, but ungenial weather retarded them until their bloom matured just in time for the heavy downpour of early June, and in the few orchards where these set, the gales and late rains have destroyed a lot of the fruit. In consequence there will be a considerable shortage of cider, while there will be practically no perry of 1903 vintage. Not having any fruit to develop, the Apple trees this season are putting forth their energies to the production of growth, so that there is the prospect of a considerable amount of soft wood.—("Pall Mall Gazette.")

Liming.

Clay soils, when wet by rains, are not porous enough to allow the water to pass through them with sufficient rapidity. In consequence they become water-logged, and the air which is necessary for the healthful development of plant roots within the soil is excluded. In dry times such soils cake readily. Liming is an effective preventive or remedy for all of these conditions. Upon certain loamy soils containing considerable clay, liming often renders the surface more friable and less liable to form a crust upon drying. The improvement of drainage brought about by liming is one of the most effective means of preventing surface washing. When heavy rains occur on limed soils the water sinks into the soil instead of rushing over the surface. Soils which are composed of siliceous sand are frequently benefited by being rendered more compact by liming. On such soils carbonate of lime is preferable to air or water slacked lime, owing to the caustic nature of the latter, and the best material to employ where it is obtainable is a clay marl containing a fair amount of carbonate of lime. The clay as well as the lime tends to materially improve the physical condition of the soil. It should also be the aim to increase the amount of organic matter in such soils by the use of muck and stable manures, or by the occasional ploughing under of a green crop or of sward.

A Giant Spruce.

The largest tree in Oregon was felled recently to be sent as a curiosity to the World's Fair. It is the Aberdeen Spruce, and stood nearly 300ft high, 40ft around, and 118ft from the ground to the first limb. Its age is calculated at 440 years, being a good-sized tree when Columbus discovered the land that was afterwards called America.

An Arboreal Sphinx.

A curious tree, named Dderwen Grop, is situated on the right-hand side of the public footpath in Dynevor Park, Llandilo, Carmarthenshire. The tree is a fine specimen of the Welsh Oak, and is greatly admired by all who visit Dynevor Park. It is the property of Lord Dynevor, who lives at Dynevor Castle. A peculiarity about this tree is that, when looked at from two sides, the shape of a man's face is visible, the features being quite distinct. The trunk is 9ft in length, and its largest circumference is 21ft 10in. The portion which resembles the face of a man is 5ft 6in in length. The tree is nearly 40ft in height, and, although very ancient, its foliage is rich, both in quality and tint.

The Clock Plant.

The Clock Plant is a native of Borneo, and in that country even, it is said to be as rare as in other sections of the world. The plant derives its name from its peculiar habits, which are known to but few who have not studied the plant from a scientific standpoint. The plant has leaves of two sizes, one of which acts in the capacity of a minute hand, which keeps moving until four o'clock in the afternoon, and the other keeps going until morning. The larger leaves act as the hour hands. Starting in a position when all of the leaves lie close to the stem, with the points hanging down, they rise gradually until they turn toward the top, and then they drop to their former position. It takes the smaller leaves about one minute to go through this performance, and the longer leaves just about an hour.

Failure of Fruit Crops.

The failure of the fruit crop in England, which is without parallel in the memory of the oldest Covent Garden stallholder, is affording an opportunity to American and Continental rivals of home fruit-growers which is being eagerly acted upon. According to "The Daily Mail," exceptionally large consignments are arriving from Germany, where the weather this year has been much more conducive to fruit culture than in England. Owing to the destruction of vast crops of Plums, Pears, Cherries, and Apples throughout the home counties, English fruit is four times the price it is in average years. Plums and Green Gages, which usually sell at from £8 to £16 a ton, are fetching from £32 to £64. Dealers are fearful lest foreign fruit, which is generally excellent in quality, should eventually oust home-grown products. The first consignment of Californian Pears, comprising 10,000 cases, has arrived at Covent Garden, and is realising about 10s. per case of seventy Pears.

Quinces.

There is not a finer fruit in existence than the Quince. It ripens late, when cool nights and temperate days succeed the summer's heat. Housekeepers then have time to preserve and jelly the ripe Quinces. The varieties are more limited than Pears, Apples, Figs, or other fruits. Not more than five varieties of Quinces are quoted, but all of them are good. The Chinese is the most monstrous in size. As a rule, abnormally large fruits are not so much in the aggregate as medium or small sizes. A tree that bears as the Chinese Quince such large single specimens will be sure to have the number limited. For general planting the old Orange Quince is as good as any. The Champion is larger than the Orange, and every way a fine fruit. Owing to the scarcity of Quinces in market they sell for three times the price of Apples and Pears. The Quince is not a difficult fruit to grow. It reproduces itself rapidly. The scions come up freely and form surface roots. These can be annually cut off from the main root and set in the orchard. They will bear fruit the third year, and in turn each tree reproduces itself by scions. These suckers from the main root do not come up anywhere except close around the tree. Quinces, if let alone, will grow in clumps. They are more prolific and a better quality when kept to one trunk. They make fine trees.—("Southern Fruit Grower.")

NOTES

NOTICES

Gardening Appointments.

Mr. Mabbott, late head gardener to G. E. Jarvis, Esq., Doddington Hall, Lincoln, has been appointed head gardener to the Lady Maud Rolleston, Watnall Hall, Nottingham, and enters on his duties there on August 4.

School of Gardening.

At the Gardens, Regent's Park, Mr. C. Brinsley Morley, vice-president, one afternoon of last week presented certificates to those students of the Royal Botanic Society's School of Practical Gardening who had successfully passed the Technical Education Board's examination in botany for intermediate scholarships. He congratulated Miss Verrall on having obtained two hundred and seventy-six marks out of a possible three hundred. Miss Sadler also had passed very creditably. In all thirteen certificates were awarded, of which six were taken by ladies.

New York Parks.

The New York City Park Commissioners have just issued their report for 1902. The volume consists of 200 pages, with maps and other illustrations. In the Borough of Manhattan the approximate area of the public parks of every character is 1,415 acres, in Richmond two and three-quarter acres, in Brooklyn 1,026 acres, in Queens 550 acres, and in the Bronx 3,866 acres, a total of about 6,862½ acres. In the Boroughs of Manhattan, Brooklyn, Queens, and the Bronx, there are 321,561 ft of parkways, streets, avenues, &c., under the jurisdiction of the department. The vast playground for coming generations in the Bronx is made up principally by Bronx Park, 661 acres, against Central Park's 843 acres, Pelham Bay Park, 1,756 acres, and Van Cortlandt Park, 1,132 acres. All the parks and the territory under the jurisdiction of the department were improved in general condition at the end of 1902.

Gift by Sir W. H. Tate, Bart.

The annual meeting of the Woolton Convalescent Home was presided over by the Lord Mayor of Liverpool, W. Watson Rutherford, M.P., the company present including the Lord Bishop of the Diocese, Sir William and Lady Tate, and a very distinguished company. Of the home itself nothing but the greatest praise can be afforded, the healthy position and the spacious grounds giving every facility for the poorer persons to get health and vigour if possible. Much of the ground is prettily laid out, and now it is proposed to deal similarly with the large field in front, Mr. Herbert, the courteous superintendent of the Liverpool parks, having prepared suitable plans with various shelters in case of bad weather. Sir William announced to the meeting his intention of defraying the sole cost of one, an announcement which was heartily received.—R. P. R.

Weather and the Crops.

During the past fortnight heavy showers have fallen over most parts of the country, and in the south of England the rainfall was exceedingly heavy. The broken weather has been rather tantalising for those engaged in haymaking, but, as the temperature has been decidedly high, the heat and the moisture have been very welcome for the growing crops. The grain crops have been stretching out wonderfully, and now give promise of being well up to the average. Potatoes are looking very well in general, and nothing has been heard as yet about disease among the crop, though undoubtedly the sultry, thundery weather lately experienced has been very favourable for developing the *Pero-nospora infestans*. Turnips are growing rapidly, and give promise of being a full crop. Pastures are fresh and fairly luxuriant, so that there is abundance of food for farm stock. With bright warm weather, and a refreshing shower occasionally, there is still a possibility that the crops of this season may turn out much better than was expected a month ago.—("North British Agriculturist.")

Cricket Match of the Royal Horticultural Society.

We are requested to announce that the R.H.S. Fruit v. Floral Committee cricket match, arranged to take place at Holland Park, Kensington, on the 8th inst., has been postponed.

Temple House Gardens, Great Marlow, Bucks.

The register of rainfall for July, 1903, is 4.94in, and for July, 1902, 0.92. The highest maximum was 85deg on the 1st of the month, and the lowest minimum 43deg on the 13th and 24th. The greatest rainfall for the month was on the 17th, when 1.64in was registered between 5.45 and 8.30 a.m. There was thunder on the 18th, 19th, and 22nd, and heavy thunder and hailstorm on the 29th. The highest maximum for July, 1902, was 83deg on the 14th, and the lowest minimum 38deg on the 11th.—GEORGE GROVES.

Correction.

In our report of the Cardiff Show we omitted to mention a highly meritorious exhibit, viz., an imposing group of Conifers and hardy shrubs in tubs arranged to form an avenue entrance to the popular Sweet Pea tent. The two sides were faced with fine plants of *Azalea mollis*, which had been retarded, and with small groups of *Lilium longiflorum* completed a most effective and attractive display. The specimen Conifers, standard Hollies, Portugal Laurels, &c., had already formed an exhibit at the Holland House show. In addition to the R.H.S. award the show committee awarded a silver-gilt medal to Messrs. John Waterer and Sons, Limited, for this exhibit.

Exhibition of British Grown Fruit and Vegetables.

The Royal Horticultural Society will hold an exhibition of British grown fruits and vegetables at Chiswick on September 29, 30, and October 1. The prize schedule is now ready, and contains in addition to the list of prizes, an authoritative list of dessert and culinary Apples, Pears, and Plums. Special prizes are offered for preserved and bottled fruits. A conference on vegetables will be held on Tuesday, September 29, at 2.30 p.m., Mr. G. Bunyard, V.M.H., in the chair. The following gentlemen have been asked to read papers: (1) "On Cooking Vegetables," Dr. Bonavia and Mr. James Hudson, V.M.H.; (2) "On Vegetables all the Year Round for a Private Family," Mr. W. H. Divers; (3) "On Vegetables for Exhibition," Mr. Edwin Beckett; (4) "On Vegetables for Market," Mr. W. Poupart. Any contributions to the conference will be welcomed. Donations towards the prize fund will be gratefully received by the secretary, Royal Horticultural Society, 117, Victoria Street, London, S.W., of whom copies of the schedule can be obtained. Applicants should enclose a stamped envelope ready addressed to themselves.

The Lennox Cup Competition.

This important and new departure in horticultural competitions, which has been inaugurated by Lady Algernon Gordon-Lennox, took place in the beautiful grounds of Broughton Castle on the 3rd inst. The weather fortunately proved to be delightfully fine, and the efforts of Lady Gordon Lennox were crowned with complete success, for the numerous exhibits were of a very high order of merit, and visitors flocked to see the show and surroundings in their thousands. The competition was for village societies, and was confined to the three counties of Oxfordshire, Northants, and Warwickshire. Twelve splendid exhibits were staged, but the "men of Warwickshire," through the efforts of their sturdy representatives of Tysoe, "lifted the cup," and for a year at least that valuable trophy will remain outside the county from whence it came. The Tysoe exhibit was quite a remarkable one, every dish staged being of fine quality, and in many cases superlatively good. The crowning point being that the whole was so beautifully staged as to command the admiration of all. The pronounced success of this isolated village was principally due to the efforts of the Wells Bros. (well known for the excellence of their Potato exhibits at the Midland shows), the popular secretary, Mr. J. Ashley, and other villagers. The Banbury and District Horticultural Union were second, Irthlingborough (Northants) third, Charbury fourth, Chipping Norton fifth, Kenilworth and Grimsbury, Banbury and Neithrop Union equal sixth, Guyday seventh. An objection was eventually lodged against Chipping Norton for showing an incomplete collection. This is being considered by the committee.

Michauxia campanuloides.

If, as we have often impressed upon us in familiar words, "Nature abhors a vacuum," equally does she detest uniformity and monotony. This is as evident in the realm of plants as in any other sphere, and we, her children, may well be partakers of her spirit. Even in gardening there is nothing more wearisome than to pass some time in a garden where each bed or border is an exact replica of its neighbours, and where all through the same dull tale of monotony prevails. Fortunately, such gardens are fewer nowadays, and there is a greater desire to avail ourselves of the bountiful choice afforded to us by the variety of plants at our command. Yet it is singular how in this even the claims of fashion seem exigent; how one copies another, and how the latest novelties or some familiar plants are seen with almost

name more easily negotiated by the "Man in the street" than campanuloides, descriptive enough as it is.

It is a distinct plant, even more so than the fine and newer *M. Tchihatcheffi*—here, again, I grieve to say, we must re-echo Curtis's plaintive remark on nomenclature—and always attracts notice in a flower border, with its tall spike of curious-looking flowers, whose narrow segments recurve like those of a Martagon Lily, and present a singular appearance as they droop from the stem and the axils of the branches. These flowers are white, tinged with purple, the corolla being divided into eight parts. The leaves, which are thickly covered with small, closely-set bristles, are irregularly lobed, the radical ones being lanceolate in shape. The whole plant grows from 4ft to 8ft in height, its stature depending upon the soil and treatment it receives from its cultivator.

The main charm of this *Michauxia* lies in its distinctness and



A Tasmanian Show: Chrysanthemums. (See page 128.)

wearisome reiteration. New favourites come in; old ones pass into the realms of oblivion; and we are all the poorer for this forgetfulness of good and distinct things.

Among the distinctive flowers that ought not to be forgotten—although one would not desire to see it everywhere—is a very distinct member of the Campanulaceæ in the person of *Michauxia campanuloides*. It was introduced from the Levant in 1787 by L'Heritier, who was the first to apply the name of *Michauxia* to it in honour of the French botanist, André Michaux. The name, even of the genus, is not particularly acceptable to many of us; but, as Curtis says in the "Botanical Magazine," where it is figured in Table 219, "When a plant has been named in honour of any particular person, that name must be retained in all countries, however uncouth its pronunciation may be, and there are few of our readers but what will think the present name sufficiently so." We must thus, I suppose, submit to this affliction as stoically as possible; but one would have preferred, for the sake of others, had Michaux applied to the species a

the character it gives to the border in which it is grown, a group of well-grown plants attracting much interest and forming a welcome variety from the surrounding flowers. Its one leading defect in the eyes of some is its biennial duration, which necessitates a stock being annually raised from seeds. At one time it was thought that these were not ripened in this country, but this is an error, in some parts at least, and in any case the seeds are readily procurable from the trade. They should be sown early in spring in gentle heat, or in a warm spot in the open in April. When large enough the seedlings should be pricked off, and in autumn they should be planted where they are to bloom, this being a warm, sunny, and sheltered position. When the flower spikes begin to show the plants should be staked, although in the more sheltered positions, where protected from wind, they look much better without staking. The soil ought to be rich, and well-grown plants in a suitable position will be both ornamental and interesting when they bloom in the course of the summer months.—S. ARNOTT.



Stocks for Roses.

The present disastrous season will set those who have seen their newly planted Roses perishing with melancholy frequency, thinking on the question of the suitability of certain stocks for certain soils. By comparing the facts furnished by contributors, and by actual observation in different parts of the country on the growth of Roses in different soils, I believe the truth, as far as yet ascertained, amounts to this: That Roses flourish on their own roots in a greater variety of soils than in any other form; that they do best on the Manetti stock in light soils, where sands of later formations predominate; and that they do well on the Briar (*Rosa canina*), where the Briar is found to grow most luxuriantly in its wild state, as on stiff chalky land, and some clays. Assuming these data as approximating reality, we can readily account for the preference given by so many cultivators to Roses on their own roots, for the Manetti being selected by others, and for the disappointment frequently expressed by purchasers of Roses on the Briar, because these have been transplanted into soils less adapted to the stock than that from which it was taken before the Rose was budded on it.

The soil here is very light and of good depth, and being on a slight eminence is naturally well drained, the subsoil is the green ferruginous sand found in connection with the chalk system. I have at present in the garden about one thousand Roses in all forms, budded, grafted, on Briars high and low, and on their own roots. As I have stated above, the soil is of the kind in which I have always found the Manetti stock preferred; hence, I soon discovered the evident superiority of that stock for propagation to any other method, and that, too, as a medium for getting Roses on their own roots. Roses planted out in a soil like mine on their own roots, are very long in becoming strong, and vigorous enough to withstand all the vicissitudes of the climate—not so with well-budded Manetti plants, in nine cases out of ten they make strong shoots the first year, and in the second the flowers are satisfactory.

There is a greater distinction between grafted Manettis and budded ones than many people would at first be inclined to believe. My experience thus far shows that Manetti stocks grafted under glass with artificial heat, useful as the plan is for securing a rapid propagation of new varieties, have drawbacks when planted out of doors. In the first season they are very liable to mildew, make little growth, and produce few flowers, and it is not till the second or third year that they become useful plants. I have also found that they do not readily throw out rootlets at the point of union. With budded Manetti stocks the case is different, provided they are budded as low as possible and with the stock in the open ground. If budded early in the season a plant is formed at once which should be removed in the autumn; and planted in such a soil as mine, the bud should not be less than 4 in. below the surface. If planted deeply enough roots will be formed much more rapidly than when the junction is too near the surface; care must, of course, be taken that the root of the stock is not buried in wet cold soil, which will be very likely to cause the death of the plant. If Manetti stocks are budded late in the season, it is better to leave the bud dormant all the winter. This is done by deferring till the following February or March the cutting off any of the stock into which the bud is inserted. In severe winters some casualties may occur in late budding.

In October last I examined the roots of about fifty of my oldest plants, now grown strong. In most of the budded plants of more than three years old, roots had been formed upon the stems, springing from the point of union and that part of the first shoot below the surface. In the grafted plants which were bought, plants of the then new kinds, and propagated under glass, no such roots have been formed, although it is quite probable that they will be produced. Not wishing to remove the plants, I cannot say whether the stocks of those plants which have roots formed from the Rose are dead or not. I cut off several stems with roots on them and transplanted them to another place.—SURREY HILLS.

[As a commentary on the above we quote the following from "The Rose Garden" of Mr. William Paul:—"The Manetti is desirable for Roses in pots and admissible for hardy kinds when an extremely vigorous growth is desired. It has been recommended for delicate kinds that do not grow well on the Dog Rose, but my experience does not uphold the recommendation. That plants grow more vigorously on the Manetti the first year we do not deny, but their subsequent decline is also more rapid."]

Roman Love for Roses.

The love of the ancients for Roses was something fanatical. I do not so much refer to the poets; for probably the modern and the antique bards may vie with each other in the use of the Rose as a common-place of poetical illustration; but I allude to a strong passion for the visible, tangible, scent-giving Rose, as something to be enjoyed by all the five senses, scarcely excluding that of hearing, for a rustle

of many Roses must have attended some of the more extraordinary manifestations of idolatry. A time without Roses was a contingency to be avoided at any cost; and the Romans, though the mildness of their climate allowed the adored flower to grow at an unusually late season, could not submit to the privations of a winter. Not only were whole shiploads of Roses brought from Alexandria in the inclement season, but various means were devised for preserving the gathered flowers throughout the year with as much freshness as was attainable.

The wreath of Roses, of which one reads and writes about so often without any other image than that of a curved twig with a tolerably rich supply of floral ornaments, was capable of a high degree of elaboration; for the Roman florists looked upon an enlacement of whole flowers as an exceedingly meagre affair. For a grand work of art they took the Rose leaves separately, laid them over each other like scales, and thus produced a sort of fragrant sausage.

This refinement in the construction of wreaths will show that the luxurious ancients not only insisted on the constant presence of Roses, but were determined to have them in as large a quantity as possible. The anecdotes which illustrate this form of the floral passion could scarcely be surpassed in wonder by the wildest imagination:—"To enjoy the scent of Roses at meals," says Herr Wustemann, "an abundance of Rose leaves was shaken out upon the table, so that the dishes were completely surrounded. By an artificial contrivance, Roses, during meals, descended on the guests from above. Helio-gabalus, in his folly, caused Violets and Roses to be showered down upon his guests in such quantities, that a number of them, being unable to extricate themselves, were suffocated in flowers. During meal times they reclined upon cushions stuffed with Rose leaves, or made a couch of the leaves themselves. The floor, too, was strewn with Roses, and in this custom great luxury was displayed. Cleopatra, at an enormous expense, procured Roses for a feast which she gave to Antony, had them laid two cubits thick on the floor of the banquet-room, and caused nets to be spread over the flowers in order to render the footing elastic. Helio-gabalus caused not only the banquet rooms, but also the colonnades that led to them, to be covered with Roses, interspersed with Lilies, Violets, Hyacinths, and Narcissi, and walked about upon his flowery platform."

As a source of artificial perfumes the Rose was employed by the ancients in other ways than in those oils and waters that are familiar to modern life. When the leaves had been pressed out for higher uses, they were dried and reduced into a powder, called "diapasma," which was laid on the skin after a bath, and then washed off with cold water. The object of the process was to impart a fragrance to the skin. As a medicine, Quinces preserved in honey were introduced into a decoction of Rose leaves; and the preparation was deemed good for complaints of the stomach. In the culinary art Roses had likewise their place of honour, and were put into many dishes for the sake of their pleasant flavour. For this end they were sometimes preserved—a delicate process, as they were very apt to become mouldy.—D. A.

This Summer Time.

Gather ye Rosebuds while ye may,
Old time is still a-flying;
And this same flower which smiles to-day,
To-morrow will be dying.

In these words of Herrick there is a combination of joyousness and sadness; a tone of mingled pleasure and foreboding, and yet they sound a predominant note of delight and of pleasure in the present, which we gardeners would do well to adopt. It is true enough that the autumn and winter are before us, when our favourite flowers will be no longer things of beauty, but mere shrivelled vestiges of what they are now. Yet in the present it is given to us to draw from their beauty inspiring draughts which will keep our hearts unseared and hopeful when they have passed away. Thus we may look upon the reign of Queen Summer as a period of joy to give us strength for the future, and a time which it is our duty to make the most of, so that we may enter upon the dreary days undisheartened and full of hopefulness. And how our flowers do minister to these cheering thoughts! These Rosebuds Herrick counsels us to gather "while we may," with all their beauteous sister flowers, speak eloquently to us and inspire us with "thoughts too deep for words;" but thoughts which help us immeasurably. Let us look at them now, even if our glance can only include a few of the many things which might come within its range.

Lately we have all been praising the Rose, whose opening flowers called forth the delightful stanza of the old poet, but sitting now with this queenly flower in full view one must once again express one's delight in the "summer's queen." From the window of my little garden study one cannot look out without the eye being caught by the sprays of Wichuariana hybrid pink Roamer which hang over a part of some of the panes, as if to insist that these pretty single flowers in such profusion cannot go unrecorded. From another window there is a glimpse, too, of the brilliant flowers of Crimson Rambler, not so plentiful this season as one would like, and a lovely unnamed double white Rose, which has proved more generous than William Allen Richardson, which grows beside it, but which is this year chary of its blooms. There, again, is the old blush Monthly Rose, almost a constant bloomer here, save for a short time in the depth of winter. On a pillar is the free-blooming Longworth Rambler;

on another Madame Isaac Pereire. Close by, on the trellis, is Madame Alfred Carrière, one of the most lovely and most dependable of all my Roses. Further away is the climbing form of the lovely Mrs. W. J. Grant; while opposite it again are the great, deep-coloured blooms of Noella Nabonnand, and the fine flowers of Souvenir de Madame Joseph Metral. Up and down are these and other Roses; for the Roseless garden is an anachronism in a summer day.—S. F.

Methods of Propagation.

RUNNERS.—Some plants are increased by runners, good examples being seen in the Violet and Strawberry: the latter is invariably propagated in this way. Runners proceed along the ground, and form small plants, which are at first nourished by the parent, but afterwards root and support themselves. Roots are formed naturally, but the process may be hastened by pegging the runner in the soil. The Strawberry often makes very long runners, from which proceed several plantlets. The strongest must be selected, which will generally be the one nearest to the parent plant; the part of the runner above the plantlet must be cut off; it may then be secured in the soil by means of a peg. Some make a practice of twisting the runner; this operation ruptures the vessels, and checks the flow of nourishment from the parent plant, and is said to hasten the rooting process of the plantlet. Runners are often rooted in pots; indeed, this is the best way for many purposes. Water must be applied when required until the plants are well rooted, when they may be severed from the parent plant. It is best to give them a shady position for a few days before planting out or potting, as the case may be. Runners may be taken off before roots are formed; it will then be necessary to insert them in a frame. The latter must be kept close and shaded until the plants take root, afterwards gradually inure to light and air.

SUCKERS.—These are branches or shoots of underground origin, and when furnished with a good number of roots may be detached and planted without further preparation. This is a very simple method, by which many plants may be propagated, and is much practised by nurserymen. We have good examples in such plants as Lilac, Berberis, Spiræa, Raspberries, Filberts, and Black Currants. This method is not at all times desirable, as plants produced from suckers will generally throw out suckers themselves; and we cannot therefore get plants with a clean stem. Black Currants are increased in this way as a ready means of securing young wood, which invariably produces the finest fruit. Market growers, I believe, generally grow their bushes on this principle. It sometimes, however, makes a great deal of extra labour at pruning time, and the ground is more difficult to keep clean. There are plants propagated in this way that would be better raised from cuttings.

BULBS consist of three parts. In the first place we have a more or less fleshy disc, from the under side of which the roots arise; secondly the fleshy coats or scales borne on the disk; thirdly the central shoot, also borne by the disk, which is composed of rudimentary leaves and flowers and is protected by the coats or scales. In Lilies there is a large number of small scales, which only partially overlap. These are termed scaly bulbs—tunicated bulbs—examples of which are found in the Hyacinth and Onion. The scales form a complete sheath, one within the other. The number of scales constituting the mass of a bulb varies much in different plants. As already stated, the Lily has numerous scales; so, also, has the Hyacinth. The garden Tulip and Crown Imperial have comparatively few scales, while in Gagea and other plants there exists only one. There are annual, biennial, and perennial bulbs. The garden Tulip is an example of an annual bulb. *Fritillaria imperialis* (the Crown Imperial) of a biennial bulb, and the garden Hyacinth is a perennial bulb. Bulbs are multiplied by buds developed in the axils of the scales in the form of new bulbs. These are produced, in many instances, in great abundance; Lilies, for example, where we find a number of small bulbs around the old ones, as well as those within the scales. Most kinds of Lilies may also be propagated by bulb scales. They should be carefully detached and bedded in sandy loam. If placed in a warm temperature most of them will make one little bulbil, sometimes more. These will in time develop into flowering bulbs. *Lilium bulbiferum* and *L. trigynum* bear in the axils of the leaves quantities of bulblets. They

may be easily collected in summer, and if treated in the usual manner will eventually form flowering bulbs. *Dentaria bulbifera*, one of our native Cruciferous plants, may be increased in the same way. *Vallota purpurea*, *Hippeastrums*, the bulbous Irises, and other bulbous plants (although many may be easily propagated by seed) are usually increased by this method. Starving the plants is said to induce them to make offset bulbs, splitting the bulb into segments will also cause the production of small bulbs. This operation should take place when the bulb is in full growth and vigour. The small bulbs may be bedded in boxes or pans, or in some cases in lines in the open ground. They should be kept free from weeds, and apply water when required.—J. S. U.

The Carrot Crop.

"W. S." has undoubtedly done good service in drawing attention to the generally unsatisfactory condition of this crop during the present season, because it is important to take every possible precaution to prevent a similar occurrence another year. During the last few weeks I have visited upwards of 200 gardens, and in very few have the Carrot beds been quite satisfactory. In many instances the Carrot grub had wrought great havoc, and the rows were in consequence "patchy." In other cases, although the rows were fairly even, the aphids had prevented the plants from growing with their usual freedom. Since the recent rains, however, matters have considerably improved, and where the young roots had not been attacked by grub the crops will, I think, eventually turn out fairly well.

I am fully aware that both Mr. A. Dean and "W. S." are well up in the many "wrinkles" connected with Carrot culture, but I cannot help thinking that both take a somewhat too gloomy view of the matter in intimating that there is anything very mysterious about the many failures recorded, or that really effectual methods of prevention have yet to be brought forward. The season has been a peculiar one. After the seed was sown we experienced a long spell of wet, cold weather, and in some cases the seed rotted instead of germinating. In others, although the young seedlings pushed through the soil, they could make but little headway against the hordes of slugs which were waiting to devour anything in the shape of young vegetation. These conditions accounted for many of the early failures. The young plants were simply eaten as soon as they pushed through the soil, and those who at that stage were wise enough to fork over the ground and sow again have, as a rule, succeeded much better since. Many growers managed to get over the difficulty of the early part of the season, and had fairly even beds until the spell of hot weather set in, then aphids and grub soon wrought havoc with plants weakened through having an unfavourable start.

My firm conviction is that where the crop has been a real failure, either early or late in the season, it could have been prevented by due attention to well known methods of culture, and by adopting precautions against insect pests. During some seasons Carrots grow so easily, and are troubled with neither insect pests nor diseases, with the result that under pressure of other work we are inclined to neglect such methods of culture which entail a little extra trouble, and then, when unfavourable weather comes, the crop suffers in consequence. It always pays to give a little extra attention to soil preparation on land intended for Carrots. Apply soot and throw it up roughly early in the season; then before sowing give another dressing of soot and fork the soil over again, choosing, if possible, a sunny day for the purpose. After sowing, if the land is light, tread or roll the surface, and finish off with a light raking. Run the hoe through the bed as soon as the rows can be distinguished, and hoe regularly once a week after, until the tops become too large to allow this to be done. I have great faith in the regular use of the hoe. Early in the season it helps the young plants forward, and prevents slugs from working, as they detest freshly loosened soil; and later on it works to a great extent the ravages of the grub. One prolific cause of trouble with this pest is that cultivators will neglect to thin their crops early, in order to get roots for pulling young. When these are pulled during the active season of the Carrot fly, especially during hot weather, the insect meets with holes ready prepared for the reception of their eggs, and who can blame them for turning them to good (?) account?

Those who want a supply of young Carrots should sow a bed specially for that purpose, and pull the whole of them while they are young. The main crop for autumn and winter use ought to be partially thinned as soon as they are an inch in height. After this first thinning there should be about twice as many plants as will eventually be required. A few weeks later remove every alternate plant, tread the soil firmly around

those left, and dust with soot between the rows when the next shower occurs. Watering the rows after thinning also prevents the insects from entering the soil to deposit their eggs. When hot weather occurs during June, if the paraffin emulsion mentioned by Mr. Dean is sprayed over the tops of the plants, it will undoubtedly keep the winged insects away, and thus prevent injury to the crop. When a bed has been infested, and the same piece of land has to be used for the Carrot crop the following year, a dressing of gas lime (40lbs per rod) should be given in the autumn to kill the maggots and chrysalids in the soil.

Last year I met with several cases in which the grub had almost entirely ruined the crop. I then strongly advised those interested to follow closely the methods of culture above indicated, which they have done, and this season their beds are almost free from maggot, while those around them have suffered badly. I do not contend that everyone can secure complete immunity from an attack in one season, because the chrysalids in the soil have to be destroyed; but if they will stick to the above instructions they need have no fear of this—to many—dreaded foe.—WARWICK.

Horticulture in Tasmania.

The season of the "Mums" has now passed, and winter's garb is clothing all around. Just a few Rosebuds are lingering as if loth to leave us, even for a while. But we are content, as this has been a successful season, and the "autumn queen" was decked in her finest array. Chrysanthemums are grown here principally in the open, and towards their blooming time are protected from the weather by coverings; as, for instance, our principal grower, Mr. Charles Bourke, an enthusiastic amateur, has erected over his plants a framework, and over this is stretched hundreds of yards of calico, and in their blooming season a visit to his garden is a great treat. It is pleasing to note that several amateurs have taken up the idea of growing "Mums" in pots; but when one remembers a plate and an account of Miss Nellie Pockett, appearing in the Journal of February 15, 1902, one wonders if they will ever be able to grow them to that perfection; but I trust some of us have a gardener's virtue, patience and perseverance.

At the Launceston Horticultural Society's autumn show, held on April 29th and 30th, were to be seen some lovely "Mums": the most noticeable were Fred Hannaford, Madame Carnot, Miss Lucy Evans, Alfriston, and Miss Nellie Pockett. The prize for the best bloom was won with a beautiful bloom of Mrs. W. Mease. This variety seems to do remarkably well here. Some very pretty Cactus Dahlias were also shown, Mrs. Edward Mawley being the most admired.

Apples from Lilydale (Northern Tasmania) were excellent specimens, and were the subject of particular attention by the visitors. Among those who attended the show was Mr. A. Hunter, of "The Penang," Gosford, New South Wales. Mr. Hunter is the senior partner of the firm of Hunter and Sons, well known orchardists. The Apples, he remarked, were excellent, and for quality could hardly be surpassed. If orchardists wished to develop the export trade they should take great care in the selection of the fruit, and not pack it when in an unripe state. Mr. Hunter was a practical admirer of Mr. H. W. West's Apple trophy, as he supplemented the prize with a donation of £1 ls.—H. F. R., Launceston, Tasmania, May 20, 1903.

Some of our readers may know Launceston. Few more delightful spots exist in the world, or are more favoured by climate and situation, unless it be Hobart Town, the capital of Tasmania, on the Southern coast. Both were founded some eighty years ago, but the population of Hobart is about 40,000, or some four times that of Launceston. Tasmania, which is about the size of Ireland, lies about as far from Melbourne as Jersey from England, and is the favourite refuge of the Australians from their sun-stricken plains during December to April, where they find a land of English verdure with a climate midway between that of Devonshire and the Azores. It is at Launceston that the visitor from Melbourne first catches sight of the beauties of Tasmania.

The following comments of the local Press are supplementary to those already given upon this interesting show:

The autumn show in connection with the Launceston Horticultural Society was held in the Albert Hall on April 29, and was the most successful since the formation of the society. Although the favourable season was in no small measure responsible for the high quality of the exhibits generally, the total entries were quite a record, and in addition the attendance during the afternoon was much larger than at previous shows. The arrangements for displaying the exhibits were excellent, each of the sections being on separate tables, and the "amateurs" and "professionals" were distinguished from each

other by white and blue cards respectively. The Apple trophy, which was exhibited by Mr. W. H. West, and was given the principal honours, was quite a show in itself, and with the many other exhibits from Lilydale was an object lesson as showing the capabilities of that district for fruit growing. No less than eighty plates of Apples of assorted varieties were exhibited. Other fruits were well represented, the principal honours going to growers in the Lilydale district.

The show of Chrysanthemums was very fine, and Mr. Charles Bourke's exhibit of these favourite blooms attracted considerable attention. It may be interesting to indicate the blooms with which Mr. Bourke's successes were won. His twenty-four embraced Daniel Lambert, Acme, Madame Ad. Chatin, Silver Queen, Mrs. Thomas Lee, Modesto, Mrs. T. Carrington, Nellie Pockett, Miss Baden-Powell, Mermaid, Alfriston, Florence Molyneux, Miss Lucy Evans, Mdle. Gabrielle Debie, Meredith, Frank Hannaford, Australie, Lady Hutton, Madame Carnot, Lady Roberts, Inter-Ocean, Edwin Molyneux, Mrs. W. Mease, and Mrs. M. J. Darcey. His eighteen were Mrs. W. Mease, Australie, Lord Hopetoun, Modesto, Mermaid, Mrs. W. J. Darcey, Miss Lucy Evans, Acme, Mrs. J. Gunn, Madame Carnot, Lady Hopetoun, Nellie Pockett, Mrs. C. Salter, Western King, Mrs. Tom Rand, Mr. T. Carrington, Miss Baden-Powell, and Mdle. Gabrielle Debie. His twelve were Mrs. W. Mease, Graphie, Lady Roberts, Modesto, Lord Hopetoun, Silver Queen, Miss Lucy Evans, Nellie Pockett, Meredith, Marie Browning, Mr. T. Carrington, and Mermaid. Without exception, and taking everything, including the gale, into consideration, Mr. Bourke's display was a triumph in cultivation. The love of the Chrysanthemum is evidently extending.

Flowers of Princes and Nobles.

At this moment I am unable to say what is the method adopted by other nations of Europe, but it is no longer customary for the British soldier to carry his colours to the battlefield, or on a march through an enemy's country. It is thought the colours are dangerous, because their conspicuousness makes them objects of attack. But, on the other hand, soldiers lose the stimulus or encouragement formerly given by the sight and presence of a flag which had been borne along many a weary tramp, and flourished over the scene of hard-fought victories. In the olden time, besides standards, it was common for an army to face the enemy, every soldier bearing on his head-gear, or some part of his clothes, a twig or spray of some plant. It did not put a man in special danger when thousands had the same badge or emblem.

A notable period of English history was that in which the Rose became an important sign; the Yorkists took a white variety, the Lancastrians chose a red one, and during the Wars of the Roses these flowers were often displayed upon the battlefield. The "bonny Broom," a flower, no doubt, much easier to obtain wild formerly than it is now, was exhibited on helm or belt, since some incident had linked it with the Plantagenets. Hawthorn or Whitethorn is said to have been the chosen symbol of the Tudors, and the unfortunate Stuarts took the Thistle, a suitable emblem indeed for that race, which caused so much mischief. Plants, however, were not always worn by soldiers as a memorial of some leader or party; other reasons led to their appearance on the scene of war. The Royal Fern, that handsome Osmunda, which at one time was found in many places from which it has vanished, had its value because it was believed to ensure Divine protection if a sprig was attached to the person. Some say the Fern became notable through its association with the Pagan deity Thor, yet it was sometimes called "Herb Christopher." Our common Herb Robert is supposed to be named after a St. Robert through link it to Robert, Duke of Normandy. Anyway, the plant was credited with curative and prophylactic powers, hence people carried sprigs of it as a safeguard. A still greater value was attached to the woodland species, Geranium sylvaticum. This plant, however, being local, was less attainable.

Within the necessarily brief limits of my space, I cannot say much on my rather extensive subject, and must only refer to a few of those flowers memorable because of their connection with families or persons. We will glance back first at the Broom, already named as having been chosen by the Plantagenets for their symbol, forming, in fact, part of the title of the family. Geoffrey, Duke of Anjou, father of our Henry II., was, according to the legend, led to

gather the plant, when he passed masses of it, while going up a rocky path. He chose it for his emblem because the Broom held on bravely in the midst of difficulties, of which he had to encounter many. A very good meaning, but it seems to have been also regarded as a token of humility. It was worn by the Plantagenets till the "Hunchback Richard" ended that race. In 1234, Louis IX. of France instituted an order of knighthood, the members of which wore a chain of Broom flowers entwined with white Lilies. This is significant, if trustworthy, indicating that the Lily was even then adopted as a symbolic flower by the French.

There is no doubt that the Hawthorn or Maybush was the Tudor emblem, and we all know the story that this arose from the discovery of a crown in this bush, which was brought to Henry VII. on Bosworth Field. One feels a

Lily? There does seem good evidence that the earlier "Lily" was a species of Iris, the purple flower, in fact; it is quite recognisable on ancient devices by the drooping form of the petals. Old English authors allude to the Fleur-de-Luce as distinct from the Lily, yet Shakespeare speaks of it as a Lily, and Chaucer, in a line of his long before, implies that it was one. Again, some declare that the Crusaders brought from Palestine golden Lilies, which were placed upon their banners, and many references occur to the golden hue of the symbolic flower of France. Certainly, when a Lily became the special flower of the House of Bourbon it was some white species. It must have been white when the Dauphin was spoken of as the "Lily of France." Tasso, in his time, called Frenchmen the "Golden Lilies." During the unscientific ages we could not expect



A Tasmanian Show: The Fruit Section.

certain amount of suspicion about this story, and the Hawthorn, a species of varied significance, might have been chosen for other reasons. Thus, from the tradition that Christ's crown of thorns was made of its twigs, arose a belief that they afforded protection from evil spirits, and the Greek brides wore Hawthorn bloom as a symbol of hope. When in exile, Henry of Lancaster is said to have told his adherents to make the Forget-me-not their badge a token of remembrance, and hope too.

Probably the longest and warmest controversy about a badge or symbol has been that arising from the Lily of France, nor have the disputers succeeded in clearing up the subject much. This, however, is decided, that Fleur-de-Lys came from Fleur-de-Luce, which is really Fleur-de-Louis, after Louis VII., who made very conspicuous use of it on banners, though some assert the devices can be traced back to Clovis I. in the fifth century. But what was the so-called

modern accuracy. Two Italian parties, the Guelphs and the Gibellines, took for their tokens red and white Lilies, and an orange Lily was the original symbol of the Princes of Orange.

Archdeacon Hare tried to prove that the Sweet William was a corruption of Saint William, the flower being dedicated to that saint, whose anniversary falls on June 25, and suggested that others of the "sweets" might be "saints," too. But the Rev. H. Friend thinks the French name of *Œillet* was turned into "Willy," and the flower got associated with some William or other. Gerard speaks of the plant as a common garden flower in 1568. It would be pleasant to believe the flower was named after William Shakespeare, surely the sweetest of all Williams, but we have no evidence of that. Others have suggested William of Aquitaine, the soldier monk, who was famous in his day throughout South Europe. It is likely the original

Sweet William was a Pink, *Dianthus prolifer*, a beautiful species found in Kent occasionally. We may note that the Canterbury Bells of Kentish woods seem to have taken title from the small horse bells of pilgrims, which they resembled in shape.

Chelsea, now a London suburb, but formerly a "village of palaces," was fragrant with its herb gardens, one of which, the last to disappear, was in a part of the ground belonging to Beaufort House, the mansion of Sir Thomas More. He tells us himself, that a favourite flower of his was the aromatic Rosemary. "I let it run all over my garden walls," writes he, "not only because my bees love it, but because 'tis the herb sacred to remembrance, and therefore to friendship." A favourite flower of our forefathers, the Columbine, was the chosen badge of the old Barons Grey. The emblem selected by Catherine of Arragon was the Pomegranate, and the little Mignonette found its way into the armorial bearings of the House of Saxony, through its being chosen as her favourite by the Countess Charlotte. The first Empress of Mexico founded an Order which was adorned with a scarlet ribbon because she was so fond of the Poppy flowers. Some state that before the Monks-hood or Aconite was ecclesiastical it belonged to Odin, being called Odin's Cap or helm, being supposed to confer the power of making the wearer invisible. The Houseleek, at one period Thor's Beard, came afterwards to be St. George's Beard. Though the Rose is the symbolic flower of England the Harebell was early appropriated to that saint or hero. Many of the Highland clans used various plants as emblems or badges, amongst these were Heather, Juniper, Mistletoe, Holly, Pine, Fir, and others.—J. R. S. C.

Societies.

Royal Horticultural, Drill Hall, August 4th.

The Drill Hall was sparsely filled on this occasion, probably due to the holiday the preceding day. Hardy flowers were conspicuous by their absence, but it was said that exhibitors in this section were compelled to cancel their space through the ravages of the weather. The Cacti exhibition proved a failure, not a single amateur staging.

Orchid Committee.

Present: Harry J. Veitch, Esq. (in the chair); and Messrs. Jas. O'Brien, de B. Crawshay, Norman C. Cookson, F. Wellesley, H. Pitt, E. Hill, G. F. Moore, J. W. Odell, W. Boxall, W. H. Young, H. Little, H. Ballantine, J. Coleman, and J. Wilson Potter.

Orchids were somewhat sparsely represented, Messrs. Hugh Low and Co., Bush Hill Park, N., staged plants of *Cypripedium Rothschildianum*, *C. R. superbiens*, *C. niveum*, and *C. Kimballianum*, all well flowered; *Cattleya Mary Gratrix*, a cross between *C. Harrisoniae* and *C. Schofieldiana*, was conspicuous; while nice plants of *C. Eldorado* variety were good.

Mr. J. Davis, gardener to J. Gurney Fowler, Esq., staged a small collection, chiefly *Cypripediums*, which included well grown plants of *C. Rothschildianum*, *C. Miniatum*, and *W. R. Lea*, also a nice specimen of *Lælia Digbyana purpurata*, var. King Edward VII. From Messrs. Thomas Cripps and Son, Tunbridge Wells, came a pretty display of *Disa grandiflora*, arranged with small *Cocos Weddelliana*.

Messrs. Jas. Veitch and Sons, Ltd., staged *C. atalanta superba* and *Lælio-Cattleya Issy*.

Mr. Barker, gardener to W. P. Burkenshaw, Esq., Hesse, sent a large *Lælio-Cattleya*, named *Ivernina*, which was remarkable for its large size and rich purple lip. The same exhibitor also staged a form of *C. gigas* called *White Queen*, a fine variety. Mr. W. H. Young also staged a few *Cattleyas* and *Lælio-Cattleyas* in good form. Mr. H. T. Pitt, Stamford Hill, also contributed a few specimens.

Floral Committee.

Present: H. B. May, Esq. (in the chair); and Messrs. C. T. Druery, J. Jennings, C. J. Salter, G. Reuthe, Chas. Dixon, J. A. Nix, Chas. E. Pearson, C. E. Shea, E. H. Jenkins, W. M. James, G. Nicholson, W. Howe, R. C. Notcutt, and Geo. Gordon.

Cacti were represented only by two exhibitors, Messrs. H. Cannell and Sons, Swanley, coming up with a fine display, in which were noted specimen plants of *Echinocactus Ericsoni*, *E. peninsulæ*, *E. Wisleyensis*, *E. ornatus*, *E. Emoryi*, *E. Junori*, and *E. electracanthus*. The *Mammillarias* were represented by M. Nicholsoni, M. Gabbi, M. nogralensis, M. pusilla, M. angularis, M. denticulata, M. Donati, and M. nivea, *Trichocaulon piliferum*, *Opuntias* in variety, *Echeverias*, and a host of other species completed a really fine display.

The other collection, exhibited by Mr. Richard Anker,

Addison Nursery, Napier Road, W., was smaller, and consisted of smaller plants, *Mesembryanthemums*, *Opuntias*, *Mammillarias*, in variety; *Echinocactus longihamagus Wrighti*, and several others.

Messrs. J. Cheal and Sons, Crawley, exhibited a fine collection of flowering and foliage shrubs and trees in a cut state. The *Spiræas* were excellent, and embraced the following kinds: *S. Fortunei alba*, *S. salicifolia alba*, *S. Douglasi*, *S. brumalda*, *S. Nobleana*, *S. Anthony Waterer*, *S. brumalda superba*, *S. semperflorens*, *S. Billardieri*, and *S. Fortunei rosea*. Other noteworthy shrubs were *Buddleia variabilis*, *Colutea purpurea*, *Diervilla lutea*, *Olearia Haasti*, and *Genista capitatus*, with a variety of *Hypericums* completed the flowering portion. The same firm also opened the Dahlia season by staging two boxes of Cactus, and a box each of Pompon and single varieties. Considering the early period, the blooms were good. In the Cactus were noted good blooms of *Columbia*, *Clara G. Stredwick*, *Floradora*, F. H. Chapman, Alpha, Imperator, H. F. Robertson, Mrs. E. Mawley and Mayor Tuppenney; also some promising seedlings.

Messrs. Paul and Son, Cheshunt, contributed an interesting display of Roses, which included several varieties rarely seen. These included *R. viridiflora*, *R. anemonæflora*, *Roger Lambertin*, and *Rugosa atropurpurea*. Those of the more orthodox type were represented by nice vases of Mrs. J. Laing, Duke of Edinburgh, Lady Battersea, Cheshunt Scarlet, Frau Karl Druschki, White Lady, Liberty, and Sir Rowland Hill.

Messrs. Jas. Veitch and Sons, Ltd., staged a group of *Lantana salviaefolia*. The plants were about 30in high, and the flowers a pleasing shade of heliotrope; also three large baskets of *Senecio clivorum*, a plant with large leaves, bearing huge heads of orange flowers.

Ferns came from Mr. H. B. May, Dyson's Lane Nursery, Upper Edmonton, the chief feature of which were the *Nephrolepis*, comprising thirty-six species and varieties. Palms and small *Adiantums* were also employed. The specimens were *N. acuta*, *N. tuberosa*, *N. exaltata plumosus*, *N. E. multiceps*, *N. Piersoni*, a really fine form, and one that possesses good decorative value, *N. cordifolia recurva*, and *N. pectinata*. Nice plants were also staged of *Campanula isophylla*, *C. i. alba*, *C. i. Mayi*, *C. Barrilieri*, *C. gloriosa*, and *C. Balchiniana*.

The most attractive exhibit in the hall came from Messrs. R. and G. Cuthbert, and was composed of Palms, *Hydrangea paniculata grandiflora*, standards, and carried fine panicles of bloom; *Lilium longifolium album*, growing in 5in. and 6in. pots, simply grand, many carrying twelve blooms. Vases of *Phlox Fiancée* were also effective, as were the Ferns employed to make a groundwork.

From Messrs. Dobbie and Co., Rothesay, came a nice collection of Pentstemons and Poppies. The former were a fine collection, and included some good forms. The best were Miss Willmott, Wm. Cuthbertson, Jas. Logan Ireland, Auguste Cain, Talma, Rachel, Mary Findlay, Joannis Chatin, and Tom Burnie. The best Poppies were Fiery Scarlet, Lævigatum, Ranunculi, flowered scarlet and white, rose, and white.

Messrs. W. Bull and Sons, King's Road, Chelsea, made a nice display of *Dracæna Victoria*, edged with Palms. The *Dracænas* were splendidly grown, the golden colour being bright and effective.

Fruit and Vegetable Committee.

Present: G. Bunyard, Esq. (in the chair); and Messrs. H. Balderson, J. Cheal, H. Esling, S. Mortimer, H. J. Wright, J. Jacques, G. Norman, Jas. Smith, and Geo. Wythes.

Dr. Bonavia staged a basket of Sultanieh Grapes. They were small, and of very poor colour, but said to be sweet, and the best of the seedless varieties. Mr. Will Tayler, Osborne Nursery, Hampton, sent a dish of Peaches, called *Libra*, which were of good size. Considering they were grown in a cold house, with the exception of a little firing in March and April to keep out the frost, they have been grown quite cool. The variety appears promising.

Medal Awards.

FLORAL COMMITTEE.—Silver-gilt Flora for collection of *Nephrolepis* to Mr. H. B. May, Upper Edmonton; for group of *Hydrangea paniculata*, *Crinum Moorei*, and *Lilium lancifolium album*, to Messrs. Cuthbert and Son, Southgate. Silver-gilt Banksian for group of Cactaceous plants to Messrs. Cannell and Sons, Swanley. Silver-gilt Flora for group of cut shrubs and Dahlias to Messrs. Cheal and Sons, Crawley. Silver Banksian for group of Roses to Messrs. Paul and Sons, The Old Nurseries; for group of Pentstemons and Poppies to Messrs. Dobbie and Co., Orpington, Cheshunt; for group of *Dracænas* to Messrs. Bull and Sons, Chelsea.

Certificates and Awards of Merit.

Cattleya gigas, variety *White Queen* (W. P. Burkenshaw).—A large variety, having white sepals and petals, with a good lip, purple with yellow at the throat; blooms past their best. A.M.

Cattleya Atalanta superba (Jas. Veitch and Sons).—A cross between *C. guttata Leopoldi* and *C. Warscewiczii*. The sepals and petals are

rosy purple, while the lip is a deeper purple. An exceptionally fine variety. A.M.

Gladioli Ellington Belle (W. C. Bull).—A pale creamy form, large spike, and in good condition. A.M.

Nephrolepis Piersoni (H. B. May).—A fine form that will prove of exceptional value as a decorative plant. F.C.C.

Peach Libra (Mr. Will Tayler).—A seedling from Alexander; the fruits are large, with a slight flush on the sun side.

Belfast Rose, July 24, 25 and 27.

The flower show in connection with the annual meeting of the North-East Agricultural Association, held on Friday, Saturday, and Monday, July 24, 25, and 27, on the grounds of the society at Balmoral, Belfast, contained some very fine exhibits of Roses, when one considers the recent severe thunderstorms experienced in the neighbourhood. As may be expected where a noted firm of rosarians were at home, the cream of the prizes in the nurserymen's classes for Roses were swept away by the noted Rose raisers, Messrs. Alex. Dickson and Sons, Ltd., of Newtownards, Belfast, and Dublin, who secured every first prize in the following classes, viz.: Class 1, seventy-two cut Roses, distinct varieties; class 2, 108 cut Roses in thirty-six distinct varieties, three blooms of each; class 3, twelve distinct Hybrid Teas; class 4, twelve yellow, any variety; class 5, twelve white; class 6, twelve crimson; class 7, twelve pink or rose colour; class 8, twelve new varieties, distinct; class 9, twenty-four distinct Tea or Noisette; class 10, thirty-six bunches of cut Roses, distinct varieties, not less than three trusses of each, Hybrid Perpetuals, except single flowered varieties excluded. The varieties exciting most admiration among the visitors to the show included the following: Mildred Grant, the winning exhibit in class 5, being an exceedingly fine lot; Her Majesty, Mrs. Edward Mawley, Triomphe de Caen, Oscar Cardel, Ulster, Bessie Brown, Duchess of Portland, &c. I noticed two very fine blooms of that lovely white Frau Karl Druschki, which seemed to catch nearly everyone's eye, and undoubtedly it deserves all the expressions of admiration lavished on it.

Messrs. Dickson's stand of bunched Roses was very striking, and included some very pretty seedlings, of which we shall no doubt see something in the future. Liberty, Killarney, and Mrs. W. J. Grant in bunches formed part of a most excellent exhibit. In the amateurs' section Mr. H. Vesey Machin, of Gatford Hill, secured a fair number of prizes, but was beaten in the class for twenty-four blooms by Dr. Campbell Hall, of Monaghan, who put up a fine stand, ousting the English amateur, who in previous years has generally won in this class. In the other classes Mr. Machin staged some magnificent lots.

Non-competitive exhibits were put up by Messrs. B. Hartland, Lough Nurseries, Cork, who showed some very fine blooms of single and double Begonias and single and double Geraniums. Messrs. A. Dickson and Sons, Ltd., a stand of herbaceous stuff. Mr. T. Smith, Daisy Hill Nursery, Newry, in a well arranged stand of herbaceous plants, showed some striking bunches of *Verbascum Chaixi*, *Spiraea lobata*, *Heuchera chrysoides*, *Silene orientalis*, *Cytisus elongatus*, and *Anthemis E. C. Buxton*. Some Pansies were exhibited by Mr. Thos. Hughes, Dalcloolin, Craigavad. A very successful show was the satisfactory result, concluding with a visit from Their Majesties the King and Queen on the last day.—OSWALD TREE.

Bishop's Waltham, July 29th.

The annual exhibition was held in Swanmore Park by the kind permission of W. H. Myers, Esq., M.P., on Wednesday in last week, and was, from a horticultural point of view, a great success. The weather, though, was very bad, which must have militated against a satisfactory attendance.

Specimen stove and greenhouse plants, Ferns and table plants were best shown by Mr. F. Cawte, gardener to Mrs. C. Wyndham, Corhampton House. Begonias were quite a feature, so well were they staged, the premier award being won by Mr. Cooper, gardener to the Misses Gladstone, Hampton Hill, Swanmore. Cut flowers were staged numerous and well. For twelve distinct Mr. E. Ellwood, gardener to W. H. Myers, Esq., M.P., Swanmore Park, was first with a choice assortment of stove subjects. This exhibition also won the premier award for eighteen varieties hardy border flowers, with a nice assortment of Phlox, Campanulas, Delphiniums, Stenactis, &c. For six bunches Roses, distinct, he also staged a nice set, consisting of such varieties as *Gustave Regis*, *Crimson Rambler*, *Papa Gontier*, *Caroline Testout*. Sweet Peas and Carnations in bunches were numerous and good. For the best collection Mr. Cooper staged two dozen bunches of clean, bright flowers, and secured the coveted award. Mr. Ellwood won Mr. H. Eckford's prize for twelve bunches with a characteristic display of popular varieties. He also had the best Carnations well set up.

Table decoration was an undoubted feature of the show. Four competed in the open class for the best decorated table,

5ft by 3ft. Miss Molyneux, Swanmore Farm, was an easy first, with a charming arrangement of pink Carnations, Lily of the Valley, with Gypsophila, Smilax, &c., all lightly and tastefully displayed. Mr. Cooper was second with a pretty combination of two shades of yellow. Miss B. Dupuis, Summerlands, Curdrige, Botley, was third. In the class devoted to ladies only Miss Williams, Jervis Lodge, Swanmore, won with a tastefully arranged table. Miss Adnams second with *Plumbago capensis*, quite effectively displayed. Miss Williams also had the best arranged vase or epergne.

Fruit was numerous and good. Mr. Ellwood won for six dishes, staging Black Hamburgh Grapes, Pineapples, Nectarines, Melons, &c. Mr. J. Heath, gardener to Sir Nowell Salmon, Curdrige Grange, Botley, was second. The best two bunches of black Grapes were staged by Mr. Ellwood, really good samples of that popular Grape, Black Hamburgh. Mr. C. H. Holloway, gardener to Lord Aberdare, Longwood House, Winchester, was a close second, with *Madresfield Court*, only wanting a shade more colour to make them perfect.

Vegetables were numerous and good. No fewer than eight competed for eight dishes distinct for Messrs. Toogood's prizes. Mr. Holloway won with a capital collection of Potatoes, Onions, Carrots, Peas, and Tomatoes. Mr. Barnes, gardener to Mrs. Austin, The Thicketts, Bishop's Waltham, was second, with Mr. Cawte a close third. Mr. Ellwood won the premier award in the class where the prizes were provided by Messrs. Sutton with a collection of choice dishes. Mr. Barnes second, Mr. Cooper third.

Boston, July 29th and 30th.

This exhibition, which has been continued over many years, was held in the People's Park, South End, Boston, the main approach to which is through a charming flower garden, admirably planted and kept, which reflects great credit to the gardener who keeps it in such excellent condition. The display held this year was universally acknowledged to be the best ever held in Boston. There was a good competition in most of the leading classes, while the contributions in the classes open to all, as well as from amateurs and cottagers, were remarkably good.

Groups arranged for effect were shown in the leading class for plants. They were arranged on spaces of 100 square feet, the first prize being taken by Messrs. Artindale and Son, nurserymen, Sheffield, who had a bright and pleasing arrangement of well-coloured foliage plants, nicely blended with flowering subjects. Mr. W. A. Hervey was second, with a well arranged group. Mr. Hervey came first with six stove and greenhouse plants. He had three good Palms, a Croton, and two good specimens of *Caladiums*. A second prize was awarded to Mr. Hervey. The best specimen stove and greenhouse plant in flower was a good piece of *Hoya carnosa* from Mr. H. Bothamley; the best foliage plant a fine Palm. Several excellent specimens of *Kentias* were staged in this class. Some very good Ferns were shown by Mr. W. A. Hervey, and awarded the first prize. *Coleus*, *Fuchsias*, *Zonal Pelargoniums*, *Gloxinias*, and table plants were shown in general good character.

Roses are a leading feature at Boston. With twenty-four blooms Messrs. G. and W. Burch, nurserymen, Peterborough, were placed first, their Hybrid Perpetuals being bright and good. Their leading blooms were Prince Arthur, Fisher Holmes, Comte Raimbaud, Liberty (H.T.), very bright; Duke of Fife, Horace Vernet, Bessie Brown, Charles Lefebvre, Her Majesty, Mrs. J. Laing, Helen Keller, La France, &c. Second, Mr. F. M. Bradley, nurseryman, Peterborough. With twelve Tea and Noisette Roses Messrs. G. and W. Burch were again placed first, and also with twelve blooms of Roses. Of the former they had Maman Cochet and its white form, Madame Lambard, Madame Hoste, Mrs. E. Mawley, &c., the blooms rather small, but fresh and clean. In their twelve the chief varieties were Her Majesty, Marchioness of Londonderry, Mrs. J. Laing, Star of Waltham, Dr. Andry, &c. Mr. F. M. Bradley was second.

Herbaceous and bulbous cut flowers were shown in good character. The best twenty-four bunches came from Messrs. Artindale and Sons, who had a very good assortment; Messrs. W. and J. Brown, nurserymen, Stamford, were second, and these firms held the same positions in the class for twelve bunches. Messrs. Artindale and Son had the best twelve bunches of stove and greenhouse cut flowers, staging *Anthurium Andreanum*, *Tuberoze*, *Lapageria alba*, *Ixora coccinea*, *Trachelium coeruleum*, &c.; Messrs. W. and J. Brown were second. Fine trusses of *Zonal Pelargoniums* were staged in the class for twelve, and creditable Sweet Peas were shown in the class for twenty-four bunches. There were good bunches of hardy annuals, but twenty-four distinct varieties is too many to ask for when the prizes are small. Carnations and Picotees, in twelve varieties, three blooms of each, made a good feature, some fine blooms of Fancy and yellow ground varieties being staged by Messrs. Artindale and Son, to whom the first prize was awarded. Chief among their blooms were Charles Martel,

Alcinous, Stanley Wrightson, Pantia Ralli, Mrs. E. Hambro, Perseus, Euryalus, and Alberta, a refined yellow ground Picotee. Mr. F. M. Bradley was second with good blooms, but unnamed. Herbaceous Phloxes and Pentstemons of good quality were shown, and Lilies also. There were classes for Dahlias, but only some Cactus varieties and Pompons were staged; it was too early to have them in good character.

There was a class for the most attractive trade exhibit, the society's silver medal and a money prize being offered. Messrs. Artindale and Son were again the winners, setting up a bold and attractive table group, having Palms and other foliaged plants at the back, wreaths, crosses, and other floral designs, various cut flowers, including some 150 blooms of Carnations. Messrs. W. and J. Brown, Stamford, and F. M. Bradley also had attractive groups.

In the way of floral decorations there were some pretty tables adorned with flowers, and; what is unusual, there were two classes for them, in one of which the exhibitors were married, and in the other single ladies; all the competitors acquitted themselves admirably. There was a valuable prize for a championship bouquet, which was won by Messrs. Perkins and Son, florists, Coventry, who had a most artistic shower bouquet, composed of white Orchids and Roses, *Pan-crati-um*, and appropriate foliage. The same firm was also first with a very handsome hand bouquet, Messrs. W. and J. Brown taking the first prizes with ladies' sprays and buttonholes.

In the division from which nurserymen were excluded some good Roses were shown by amateurs, also hardy herbaceous and bulbous flowers. Among these the brilliant *Tropæolum speciosum* was very conspicuous. It is said to do well in this district. Sweet Peas, annuals, Carnations, Dahlias, Delphiniums, &c., were all good features, and there were pretty combinations in wild flowers.

Some good fruit was staged. With a collection of not less than six dishes Mr. Barson, The Gardens, Hinchinbrook, Huntingdon, was first, having well finished Black Hamburgh and Gros Maroc Grapes, Peaches, Nectarines, Figs, Melons, &c. Mr. J. Drakes was second, with good fruit also; he had Muscat of Alexandria and Black Hamburgh Grapes, Peaches, Nectarines, &c. Mr. Barson came in first with black Grapes and also with white, and there were good Peaches and Nectarines, also Melons and bush fruits. Vegetables were shown in many classes, and their clean, smooth, and refined character demonstrated what good soil there is for the culture of vegetables about Boston, and what very fine stocks they grow.

The special prizes offered by Messrs. W. W. Johnson and Son for Sweet Peas, hardy annuals, and vegetables brought excellent exhibits, of vegetables especially, and there were very good collections staged in competition for the special prizes offered by Mr. Geo. Wood Ingram, seed grower, Boston. Miscellaneous collections of plants, flowers, and floral decorations were contributed by Messrs. Dolby Bros., Hope Nursery, Boston; John Haynes, Boston; W. H. Killingworth and Co., West End; A. W. Edwards, florist, Spalding; and H. H. Small and Co., Skirbeck, Boston.

Prescot, July 30th.

For several years past the energetic committee of this useful society have met with rather severe reverses owing to inclement weather, but perseverance in the form of concerts, lectures, &c., during the winter months had enabled them to again hold their annual show. Lord Derby, with his usual kindness, had offered the society a new home, this time near the Eccleston Lodge entrance, a charming spot in every way. The exhibits throughout were of very fine quality, and an increase of some 100 over previous years. They were well staged, but in many instances unnamed, which is most misleading from an educational point and a loss to the general public who visited the show.

The open classes contained a capital assortment of plants, several new exhibitors putting in an appearance. The chief prize for a group arranged for effect had a substantial money addition to the valuable challenge vase presented by the Hon. Arthur Stanley, M.P., the winner proving to be Mr. J. George, gardener to T. Henshaw, Esq., Whitefield House, Roby, who wrested the vase from Mr. W. Lyon, gardener to A. Mackenzie Smith, Esq., Bolton Hey, Roby, last year's winner, with a group of high class plants, well arranged; a centre of *Cocos Weddelliana*, central mounds of *Crotons*, dot plants of *Oncidium flexuosum*, Roses, *Caladiums*, and *Francoas*, and a groundwork of Fern and *Panicum* were used most judiciously. Mr. H. Ogden, West Derby, and Mr. A. M. Smith were second and third respectively with plants of genuine quality.

Mr. J. Hare, gardener to G. H. Nisbett, Esq., Huyton, repeated his successes of the previous week at Huyton in stove and greenhouse plants, *Fuchsias*, and *Caladiums*. *Ixora Pilgrimi* was in excellent form from Mr. Smith, and a bold *Hydrangea* was noticeable in the four greenhouse plants from Mr. G. Osborne, gardener to Dr. Cooke, Tue Brook Villa. Mr. J.

Rose, gardener to Mrs. Kitchen, West Derby, gained a well deserved victory for Ferns, *Coleus*, and *Liliums*. Three very charming Orchids came from L. Cookson, Esq., in which conspicuous was a handsome *Cattleya Mendeli*. Table plants from the same source were extra well coloured, and *Gloxinias* from Mr. Smith grand in every point.

Cut Roses form an attraction here, Mr. P. Greene, gardener to Col. T. Gee, Greenhill, Allerton, winning each of the three classes with superior flowers attractively staged, the better blooms being *Gustave Piganeau*, *Baroness Rothschild*, *Caroline Testout*, and Mrs. Sharman Crawford. Herbaceous flowers caused a great sensation, and were superb, Col. Gee and Mr. T. Henshaw being first and second. The Sweet Pea class was well fought out, Mr. Ogden and Mrs. Harding staging the best examples, but unnamed. Cactus Dahlias and Carnations were admirable from Dr. Cooke.

Fruit classes created much interest, so good were the samples. Mr. B. Ashton, gardener to Lord Lathom, Lathom House, Ormskirk, won the four dishes; Black Hamburgh Grapes and Royal George Peaches were excellent. Mr. McKelvie, gardener to J. Stone, Esq., Roby, a good second, and Mr. W. Oldham, gardener to J. Beecham, Esq., J.P., third. Mr. Beecham had the best Black Hamburghs. Mr. Gaunt, gardener to Peter Walker, Esq., West Derby, highly coloured Muscats; Mr. Stone the best *Madresfield Court*, and Mr. Beecham superb Buckland Sweetwater. Throughout the fruit classes Mr. Ashton was magnificent, winning for Nectarines, Cherries, Currants, and Raspberries; Mr. J. C. Gamble had Royal George as the leading Peaches, and Mr. Stone the best Melon.

Vegetables here are up to the highest standard, the silver medal and first prize falling to Mr. Ashton, with perfection stamped on every one. His three dishes of Tomatoes were Eclipse, Perfection, and Duke of York. The cottagers' section was more than maintained.

Messrs. Dicksons, Ltd., Chester, had a rich selection of Roses, and Mr. H. Middlehurst his well known Sweet Peas. Mr. W. Case, the young secretary, is to be greatly complimented for his work.—R. P. R.

St. Ives, July 30th.

A society which has carried out an annual exhibition for the space of twenty-eight years has about it the elements of vitality, and in addition it is financially sound. But it had the untoward experience of a very stormy day, which it is to be feared prevented a large number from attending the show, though the weather improved somewhat towards the end of the day. The entries were unusually large, especially in the amateurs' and cottagers' classes; and they were up to the average in the open division. The soil about St. Ives must be greatly favourable to the production of quality of vegetables, and especially so in the case of Potatoes, Onions, Carrots, Peas, and Broad Beans. The competition was generally keen throughout, and the task of selecting the best dish of Peas from, say, twenty dishes of really good ones is not an easy matter. Judging was not completed until quite late, and notes of the show are necessarily brief.

The best group of plants in the open division, the space too limited to admit of much artistic taste being displayed, came from Mr. Barson, gardener to the Earl of Sandwich, Hinchinbrook, Huntingdon, who had a judicious mixture of flowering and foliage subjects. Mr. E. A. Ebsworth was second, and Mr. Johnson third. With six stove and greenhouse plants, three in flower, Mr. Ebsworth came first, and Mr. Barson second; the latter had the best foliage, but weak flowering plants. Mr. W. W. Warner had the best six *Coleus*, and he had the best plant in bloom, a good piece of *Hoya carnosus*; while Mr. Barson had the best foliage plant in a good Palm. Mr. Ebsworth took the first prize for six small but well grown Ferns. Cannas were going out of bloom. A leading feature was the Tuberous Begonias shown in sixes. There were three very good half dozens. Mr. G. D. Day was first, Mr. W. W. Warner second, and Mr. H. Goodman third. *Gloxinias* (six) from Mr. T. Lockie, gardener to A. J. Thornhill, Esq., Diddington, Huntingdon, were very good; Mr. H. Goodman was second; the latter had the best six *Balsams*; and Mr. Ebsworth the best six *Streptocarpus*. Mr. Barson was first with six table plants, and Mr. Lockie second, both remarkably good, and well suited to the purpose.

Cut Roses were as good as could be expected; Mr. C. Lamplough was first with twelve blooms, and Mr. R. M. Copley second. *Gladiolus*, in collections of six spikes, were shown by Messrs. Day and Goodman, the first named having the best. Mr. Day was also first, and Mr. Goodman second, with twelve varieties of annuals, some pretty well-grown subjects being staged. Mr. Lockie came in first with twelve varieties of stove and greenhouse cut flowers; Mr. H. Gilliat was second. Mr. Day was also first with twelve bunches of hardy flowers; good subjects were staged; Mr. H. Goodman was a close second. Sweet Peas were shown in two classes; one for twelve bunches, in which Mr. C. Lamplough was first, and Mr. H. Goodman second;

and the other for six bunches, in which Mr. Ebsworth was first, and Mr. H. Gilliat second. Zonal Pelargoniums, both double and single, and also Ivy-leaved varieties, were in good character; also Carnations in bunches.

Of floral decorations there were furnished tables 6ft. by 3ft., in which Mrs. Galloway was placed first, and Mrs. Ebsworth second. Hand bouquets, centrepieces, &c., were also shown, and children contributed pretty arrangements in wild flowers.

FRUIT.—There was a class for a collection, in which Mr. Barson gained the first prize for good Grapes, Peaches, &c.; Mr. H. Gilliat was second. Outdoor fruits were shown by amateurs and cottagers; the Cherries, Gooseberries, Currants, Raspberries, &c., were excellent.

Vegetables constituted a considerable part of the show; they were very fine in many instances from amateurs and cottagers; the competition good throughout. The quality of not a few of the dishes of Potatoes recalled the International Potato Exhibition of years ago.

Special prizes were offered for collections of vegetables by Messrs. Sutton and Sons, Reading, for six dishes, which Mr. Lockie won with Cauliflowers, Peas, Potatoes, Tomatoes, &c., all of very good quality; Mr. Barson was a close second, and Mr. H. Goodman third. Messrs. Webb and Sons, Stourbridge, also offered prizes for six dishes. Here Mr. Barson was first with a very good collection, and Mr. C. H. Coote second. The first of the special prizes offered by Messrs. Daniels Brothers, seedsmen, Norwich, was won by Mrs. Johnson. Messrs. Wood and Ingram (Jno. E. Perkins), Huntingdon, offered special prizes for eight of their novelties in vegetables. Mr. Lockie was first with excellent quality; Mr. G. Day second, and Mr. Goodman third.

Contributions not for competition came from Messrs. Wood and Ingram, who had Roses, charming cut Carnations, &c.; from Messrs. W. and J. Brown, Stamford and Peterborough, who had plants and cut flowers; from Mr. J. Wood Ingram, Huntingdon and St. Neots, who had various cut flowers of good quality; and from Messrs. G. and W. Burch, nurserymen, Peterborough, who sent some boxes of Roses.

Basingstoke, August 3rd.

The twenty-seventh annual show was held in Golding's Park, and was in every respect a great success. In the plant classes there was a distinct improvement in several ways. Fruit was exceptionally fine for the season. Vegetables were not so numerous as in the past, but the quality was not in any way lacking. The classes set apart for ladies were, as usual, well filled, while great interest was, as usual, taken in the various items. Mr. Bonnington, as usual, had the secretarial details well in hand, so ably assisted as he is by an efficient committee of willing workers.

Plants were numerous and good. For nine specimens in or out of bloom Mr. W. Hunt, gardener to D. Moss, Esq., Fern Hill, Blackwater, Farnborough, secured the leading award with handsome plants of *Allamanda Hendersoni*, *Acalypha Sanderiana*, with at least twenty shoots each furnished freely with its showy blossoms; *Kentia Belmoreana*, *Alsophila excelsa*, and *Acalypha Macafeana*. Mr. J. Wasley, gardener to J. B. Taylor, Esq., Sherfield Manor, Basingstoke, second, with capital specimens of *Kentia Fosteriana*, *Microlepis hirta cristata*, and an exceedingly fine pot of *Lilium lancifolium album*. For four flowering plants Mr. Hunt was again successful, showing *Allamanda Hendersoni*, *Acalypha Sanderiana*, *Lilium lancifolium roseum*, and *Cassia corymbosa*. Mr. Wasley second. In the class for four foliage plants, distinct, Mr. Wasley secured the premier place with healthy medium-sized specimens of *Kentia Belmoreana*, *Adiantum Farleyense*, and *Woodwardia radicans*. Mr. Hunt second. Mr. Wasley staged a fine plant of *Kentia Fosteriana* for the premier position for one specimen foliage plant. Mr. W. Tamplin, gardener to W. R. Mitchell, Esq., Down Grange, Basingstoke, was second with the same variety, Mr. Hunt following with *Latania borbonica* in a healthy condition. Exotic Ferns were well shown. For six Mr. Wasley won with healthy examples of *Microlepis hirta cristata*, *Davallia bullata*, *D. Fijiensis*, *Adiantum Farleyense*, and *A. cardiophyllum*. Mr. Hunt second with *Adiantum cuneatum* and *gracillimum* in capital condition.

Coleus were exceedingly well staged. For four pyramids Mr. Best, gardener to F. D. Leyland, Esq., The Vyne, Basingstoke, was an easy first with highly coloured examples 5ft high. Mr. W. Green, gardener to S. E. Bates, Esq., Manydown Park, second. Fuchsias were grandly staged, which is an unusual feature nowadays. For four, Mr. T. Russell, gardener to R. Blencome, Esq., Shippets House, Basingstoke, was an easy first prize winner with plants fully 7ft high, quite shapely and grandly flowered, the varieties being *Rose of Castille*, *Elegans*, *Marginata*, and *Charming*. Mr. C. Kew, The Common, Basingstoke, second. *Begonias*, *Caladiums*, *Liliums*, and *Geraniums* were well staged. Messrs. Hunt, Green, and Perry, gardener to C. J. Steevens, Esq., Sherborne House, were the principal prize takers. For a group of miscellaneous plants arranged in a half circle, 10ft by 7ft, there was but one entry, Mr. Best.

This was good in every respect, that the judges had no alternative but to award it first prize.

Cut flowers were numerous and good. For twenty-four Roses, distinct, Mr. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester, was an easy first with medium sized well coloured blooms; especially good were Alfred Colomb, A. K. Williams, Earl of Dufferin, Sir Rowland Hill, White Lady, and Le Havre. Mr. Hunt third, the second prize being withheld. For twelve Mr. Neville was also first, as well as for a dozen Tea-scented, staging really good blooms of *Caroline Testout*, *Charles Lefebvre*, *Comtesse de Ludre*, Mrs. M. Cochet, Anna Olivier, Catherine Mermet, and Mrs. E. Mawley. Carnations and Picotees were not numerous, but some were of excellent quality. For twelve Mr. Neville easily secured the leading award with beautifully finished blooms of Mrs. F. W. Flight, Mrs. B. Burdas, Alberta, Countess Verulam, Myrab, Gromow, Argosy, Amphion, Alcinos, and Guinersse. Mr. T. Tucker, gardener to Dr. Maples, Kingsclere, second. For Carnations in trusses of three Mr. Neville staged *Gladys*, *Gromow*, and Mrs. Burdas, and won easily. Mr. W. Tamplin second. For six bunches of Sweet Peas, distinct, Mr. C. W. Breadmore, Winchester won easily with *Lady Ormsby Gore*, *Countess Cadogan*, *Duke of Westminster*, and *Dorothy Eckford* as his best. Mr. S. Clifton, Winchester, second amongst five competitors.

Hardy herbaceous plants were a feature, as they always are here. For twelve distinct Mr. Hunt was first, staging huge bunches of *Pentstemon Newbury Gem*, *Platycodon grandiflorum album*, *Coreopsis Eldorado*, *Chrysanthemum maximum*, and *Aconitum napellus bicolor*. Mr. Wasley second, with Mr. Tamplin a good third.

Messrs. Ladhams, Shirley, Southampton, offered prizes for a collection of cut flowers grown out of doors. Here Mr. Hunt again secured the leading award with a distinctly creditable display of popular varieties, which well illustrated the value of this section of plants for cutting. Mr. Tamplin second. Mr. Wasley was first for twelve cut flowers, any kind distinct, *Ixora Williamsi*, *Allamanda Hendersoni*, *Gloriosa superba*, and *Bougainvillea glabra*. Mr. Hunt second.

Fruit was plentiful and good. For six dishes distinct Mr. Wasley was first, with very fine *Madresfield Court* Grapes, *Hero of Lockinge* Melon, *Barrington Peaches*, *Rivers' Royal Orange* Nectarines, *Brown Turkey Figs*, and *Oullins Gage* Plums. Mr. Hunt followed closely with capital *Foster's Seedling* Grapes and *Rivers' Nectarines*. For two bunches *Black Hamburg* Grapes Mr. Tamplin won first prize with medium sized bunches and berries capitally coloured. Messrs. Hunt and Green second and third respectively. In the class for two bunches, any other black Grape, Mr. Wasley, with huge bunches of *Madresfield Court*, requiring but a little more colour to make them perfect, won first place quite easily. Mr. Hunt, with *Muscat Hamburg*, was second; Mr. Best, with *Gros Maroc*, third. In the class for two bunches any *Muscat Grape* Mr. Wasley was again first with grandly berried bunches of *Madresfield Court*, Mr. Hunt second with *Muscat Hamburg*, Mr. Green third with *Muscat of Alexandria*. Melons were few in number but good in quality. *Windsor Castle* won for Mr. Tamplin first place in the green flesh section, Mr. Hunt occupying a similar position with *Sutton's Scarlet* in that division. Mr. Wasley, with *Exquisite*, won for a dish of Peaches, also for Nectarines, with *Pineapple*. Mr. Wasley also had the best three dishes of Plums, really good fruit of *July Green Gage*, *Czar*, and *Angelina Burdett*.

For Messrs. Sutton's prizes for six dishes of vegetables there were but two entries. Mr. Kneller, gardener to Sir Wyndham Portal, Malshanger Park, was an easy first with magnificent *Perfection* Tomatoes, *Autumn Giant* Cauliflowers, *Intermediate* Carrots, *Sutton's Masterpiece* Pea, *Ailsa Craig* Onion, and *Adnam's Glory* Potato. Mr. Best was a good second. For eight varieties these two exhibitors occupied similar positions with similar produce.

For the best decorated table for six persons, open to ladies only, there was a spirited competition and a satisfactory display. Mrs. Thorne, Winchester Street, Basingstoke, won the premier award with an arrangement of mixed flowers quite elegantly arranged. Miss Nellie Wadmore, Brook House, Basingstoke, was second, with a rather heavy centrepiece, otherwise an elegant combination in pink, of Roses, Carnations, and Sweet Peas. Miss Ethel Middleton, Red Lion Hotel, Basingstoke, was third, with *Bougainvillea glabra* very prettily arranged. For the best arranged stand of wild flowers, grasses, and berries, Mrs. Thorne also won with a pleasing combination, not too heavily arranged. Mrs. W. C. Selby, Winchester Road, Basingstoke, second. Miss Kate Wadmore had the best pair of stands or vases arranged for table decoration. Mrs. Thorne second. Miss N. Wadmore was an easy first for a floral basket arranged for effect, really a charming display.

Non-competitive exhibits were numerous and interesting. Messrs. B. Ladhams, Ltd., Shirley, Southampton, had a capital selection of herbaceous flowers, consisting of *Gaillardias*, *Rudbeckia conspicua*, *Lobelia cardinalis*, *Andrew Barlow* Phloxes, and *Pentstemons* in variety. Amongst the latter were *George*

Home, Joseph Kent, Newbury Gem, James Hamilton, and Her Majesty. Mr. Maurice Prichard, Christchurch, had also a similar group, consisting of *Inula Roezlei*, *Tritomas Rufus* and *Lemon Queen*, *Dianthus Napoleon III.*, *Veronica subsessilis*, and *Gladioli* in variety. Amongst the latter were fine spikes of Mrs. Beecher, Baron Joseph Hulot, a very fine rich purple; *Lafayette*, cream, with crimson throat; *Bondon*, and *Commandant de Gerlache*, blue. Mr. C. W. Breadmore, Winchester, had two dozen bunches Sweet Peas in popular varieties. Messrs. E. Hillier and Sons, Winchester, had Roses in quantity; especially good was *Madame Abel Chatenay*.

West Derby, August 3rd.

In the midst of delightful weather this popular annual event was held in a field adjoining the vicarage kindly lent for the occasion by the rector, the Rev. Percy Stewart. At the luncheon presided over by the energetic chairman, Mr. C. A. Young, of the Floral Nurseries, the speeches delivered by Mr. Geo. Haigh and Mr. R. Pinnington dealt chiefly with the beneficial results accruing from allotments, and C. Crosthwaite, Esq., the esteemed hon. treasurer, fully supported the remarks, and spoke of the far reaching effects such shows had. The latter gentleman, by his standing in the neighbourhood, will, I feel sure, further the cause of the society very much, and with Mr. Rose and Mr. Young as colleagues a higher position is certain to be maintained.

The show itself was a tribute to this aristocratic neighbourhood, the groups especially denoting real improvement. The first position was worthily taken by Mr. G. Osborne, gardener to Dr. Cooke, with a high central mound and four corner ones beautifully furnished. Crotons of rich hues and a most judicious selection of flowering plants, and a cool groundwork almost composed entirely of Maidenhair Fern was refreshing. The second, from Mr. J. Knowles, gardener to Mrs. H. Bright, had charming light foliage effects and a capital foreground. Mr. H. Ogden a close third. Dr. Cooke had the lead with two foliage and flowering plants; *Ixora Pilgrimi*, *Bougainvillea Sanderiana*, and well coloured Crotons *Chelsoni* and *Reidi*, *Allamanda nobilis* (fine), and a huge Croton *Chelsoni* were his prize single specimens, his *Lilium speciosum Melpomene* being a show, and Palms healthy. Mrs. Bright showed choice table plants. Dr. Cooke led somewhat easily in H.P. and Tea Roses with Ulrich Brunner, Mrs. J. Laing, Catherine Mermet, Kaiserin Augusta Victoria, and The Bride in good form. Mr. J. Ashcroft, gardener to W. Leeming, Esq., easily led with *Gladioli* and Sweet Peas, and Dr. Cooke with a most useful lot of herbaceous flowers. Cactus Dahlias were moderate, and one regretted to see the almost entire absence of show and pompon varieties.

There was not a heavy competition in fruit, but a special word is due to Mr. Gaunt, gardener to J. Walker, Esq., for superb Muscats, and to Mr. Leeming for similar quality in Black Hamburgs and Buckland Sweetwater. A certificate was given to Mr. J. Skitt, gardener to Mrs. A. H. Bright, Knobby Ash, for enormous bunches of Black Hamburg.

Vegetables, notably the twelve distinct, showed the standard judges aim at every sample free from every trace of coarseness and age, Mr. J. Ashcroft winning with splendid Ailsa Craig Onions, Model Carrots, Duke of York Potatoes, Egyptian Beet, and Lyon Leeks. Dr. Cooke second with good Peas, Beans, and Potatoes. Mr. H. Spencer, gardener to A. H. Jones, Esq., first for six, ruined in appearance by untidy staging.

Under gardeners and cottagers made a record display, the highest marks of perfection were noticeable, particularly in the vegetables.

From R. F. Le Doux, Esq., Marlfield, came a most welcome table of Orchids composed of handsome forms of *Odontoglossum crispum Harryanum* and *Krameri*, Tomatoes, Early York Peaches, and Lord Napier Nectarines. Mr. C. A. Young, Floral Nurseries, West Derby, is in addition to Carnations, specially dealing with Dahlias, and a certificate was granted for a beautiful arrangement in bamboo stands, with a background of Silver Acers.

The special prizes offered by Messrs. Fishlock Bros., florists, was won with a neat basket of Sweet Peas, but here, to give satisfaction to all exhibitors, the committee should certainly limit the size of the baskets.

During the afternoon the Earl and Countess of Sefton, Croxteth Hall, paid a visit to the show and evinced the greatest interest in the exhibits.—R. P. R.

Leicester, August 4th and 5th.

The morning of the 4th opened at Abbey Park with every appearance of coming rain, and a slight shower happened just before noon. Happily, it was of very short duration. The weather broke beautifully fine soon after, and thousands of visitors wended their way to the park to see one of the finest displays ever seen in Leicester. One principal feature was the large number of trade exhibits, which furnished many varied and peculiarly interesting features. The Abbey Park was seen at its best; Mr. John Burn, the superintendent, does his

utmost to make the park attractive, as, indeed, he does in the case of all the open spaces he has under his control, and he succeeds in a remarkable degree. There are some features of gardening in the Abbey Park of a very high order of merit.

PLANTS.—Turning to the details of the exhibition, the principal class was for a group arranged for effect, covering a space of 160 feet, and here Mr. James Cypher took the first prize with one of those artistic and rich arrangements he is in the habit of setting up with so much skill. The beauty of the flowers employed harmonised well with the rich colouring of the foliaged plants. Mr. Thompson, Little Over House, Derby, was second, and Mr. W. Finch, Coventry, third, both with attractive and well-finished groups. With six stove Mr. Finch was first; he had a very fine *Ixora Williamsi*, a *Bougainvillea*, and an *Erica*, a Palm, and two Crotons. Mr. H. Blakeway, gardener to Sir A. Muntz, Bart., was second; he had a good example of *Allamanda Hendersoni*, a *Statice*, &c. Mr. Blakeway was first with six exotic Ferns, staging good even, well-grown examples unnamed. Mr. H. Rogers, Gipsy Lane Nursery, Leicester, was second. The best plant in bloom was a fine *Ixora Williamsi* from Mr. Finch, and this had a silver medal awarded to it also.

ROSES.—Cut Roses came next in the order of the schedule, and deservedly so, for it is one of the leading features of the show. The best thirty-six blooms dissimilar came from Messrs. Alex. Dickson and Sons, Newtownards, Belfast, who had very fine blooms indeed, among them George Dickson, a grand new Irish Hybrid Tea, something of the colour of Liberty, but large, shell-petalled, full, and very fine; *Duchess of Westminster*, a highly promising new pale Rose; *Le Duc de Morney*, Mrs. J. Laing, Horace Vernet, Marchioness of Londonderry, J. S. Mill, Bessie Brown, Ulster, Her Majesty, Alfred Colomb, La France, Mildred Grant, Charles Lefebvre, &c. Messrs. D. and W. Croll, nurserymen, Dundee, were second, they having very good blooms of Horace Vernet, Bessie Brown, Caroline Testout, Mildred Grant, Frau Karl Druschki, Mrs. E. Mawley, Gustave Piganeau, Marchioness of Londonderry, Alice Lindsell, White Lady, Dr. Andry, &c. Messrs. Harkness and Co., Hitchin, were third. With twenty-four varieties Messrs. Dickson and Sons were again first. They had in very fine character *Le Duc de Rohan*, Helen Keller, Bessie Brown, Oscar Cordel, Captain Hayward, Alfred Colomb, Her Majesty, Mrs. J. Laing, Alan Cheales, Louis Van Houtte, Rosslyn, Alice Lindsell, &c. Second Mr. J. Barron, Leicester; and third Messrs. Harkness and Co. With twelve Teas and Noisettes Messrs. Dickson and Sons were once more first, having very fine blooms of *Madame Jules Gravereau*, *Golden Gate*, *Lady Derby* (new), *Madame Vermorel*, *White Maman Cochet*, *Souvenir de S. A. Prince*, and *George Prince*, a new Tea. Messrs. D. and W. Croll were second, and Messrs. Harkness and Co. third. With twelve blooms of one variety Messrs. Dickson and Sons led the way, having Mildred Grant in very fine character. Messrs. D. and W. Croll came second with Mrs. W. J. Grant, and Messrs. Jarman and Co., nurserymen, Chard, third, with Mrs. J. Laing. With twelve Teas, one variety, Messrs. Dickson and Sons again took the first prize with very fine blooms of Mrs. E. Mawley. Messrs. D. and W. Croll were second with the same variety, and Messrs. Harkness and Son third with *White Maman Cochet*. The best Rose in the show was the new H.T. George Dickson, shown by Messrs. Dickson and Sons.

Roses were also shown in a few classes by amateurs, and by gentlemen's gardeners. Some very creditable blooms were staged, but the crowded state of the tents, which were filled to overflowing as soon as they were opened to the public, prevented any notes from being taken. The principal prizewinners were Messrs. H. W. Machin, R. Parks, and the Rev. J. H. Pemberton. Mr. Machin had the best twelve blooms of one variety, staging *White Maman Cochet* (very good); Mr. R. Parks was second with *Her Majesty*.

Begonias, double, were very finely shown by Messrs. Blackmore and Langdon, Twerton Nursery, Bath, who had varieties of the highest quality. They took the first prize for twenty-four blooms and also for twenty-four singles, equally fine in development. Messrs. Jarman and Co. came in second with doubles, and Mr. C. Burditt, Great Bowden, third. Cut Begonias were also shown by amateurs, but they were of indifferent quality.

Carnations and Picotees were a very fine feature, especially the selfs and yellow grounds. With twelve flakes and bizarres Messrs. Thomson and Co., nurserymen, Birmingham, were first, having well developed blooms of Gordon Lewis, J. S. Hedderley, Master Fred, Robert Houlgrave, George Rudd, Guardsman, Merton, Sportsman, &c. Mr. A. R. Brown, Handsworth, Birmingham, was second, also with good blooms. With twelve selfs Mr. G. Rudd, Cotteridge, was first, having fine flowers of excellent varieties, but unnamed. Messrs. Thomson and Co. were a close second. They had in capital character Mrs. Eric Hambro', Lady Hermione, Sir Bevy's, Germania, Her Grace, Barras, &c.; third Mr. A. R. Brown. With twelve yellow

grounds Mr. Rudd was again first with large full blooms of Argosy, Pagan, Euryalus, Voltaire, Queen Bess, Hidalgo, Golden Eagle, &c. Messrs. Thomson and Co. were second, and Mr. A. R. Brown third. With twelve Picotees, white grounds, Messrs. Thomson and Co. were placed first and Mr. A. R. Brown second. There were classes also for the best bizarre, the best flake, also self and Picotee. In the amateurs' division, in which the competition was very good, Mr. J. Grumley was first with six Carnations and Mr. W. C. Baker was second. Mr. J. Grumley was first with six Picotees and Mr. H. Grumley second. With six yellow grounds Mr. J. Ward was first and Mr. H. Grumley second; and these two occupied similar positions with six self Carnations. With six bunches, six flowers of one variety in a bunch, Mr. H. Yeomans was first. There were classes also for single blooms, in which the competition was very keen.

Hardy annuals shown in bunches, one class being for twelve, made a pretty display. Mr. M. Firth was first with such things as Zinnias, Lavatera, Stocks, White Spiral Candytufts, Salpiglossis, &c. Mr. H. Blakeway had the best twelve bunches of stove and greenhouse cut flowers, staging in fine character Bougainvillea glabra, Eucharis amazonica, Gloxinia, Ixora, Tuberosa, Pancratium, &c. Zonal Pelargoniums were shown in bold trusses. Mr. J. Hudson was first. Mr. P. Newbold had the best six blooms of Fancy Pansies, and Mr. Hill the best twelve bunches of Violas, Mr. W. Wright being a close second. Messrs. Jarman and Co. were first with twelve Show or Fancy Dahlias, staging good blooms for the season. Mr. H. Frettingham had the best twelve blooms of Cactus Dahlias; Messrs. Jarman and Co. were second.

Messrs. W. and J. Brown, Stamford, were first with a hand bouquet, and Mr. H. Rogers second. Mr. H. Carnall, London Road, Leicester, had the best basket of cut flowers, several charming arrangements being shown.

Bunches of hardy herbaceous and bulbous flowers were very finely shown by Mr. W. B. Child, Acock's Green, Birmingham, who made a really grand display. They were also in fine character in other classes.

Fruit was remarkably good, and the judges in this department spoke highly of it. With eight dishes, Mr. J. H. Goodacre, The Gardens, Elvaston Castle, Derby, was first, having two bunches each of very fine Black Hamburg, Muscat of Alexandria, and Madresfield Court Grapes, Barrington Peaches, Elrue Nectarines, Figs, Melon, and a Queen Pine. Mr. J. Read, The Gardens, Bretby Park, Chesterfield, was second with Buckland Sweetwater and Black Hamburg Grapes, and other good subjects. Mr. J. Swanwick, Nottingham, was third. Mr. Goodacre was also first with eight dishes, including two varieties of Grapes, Pine excluded. He had Black Hamburg and White Muscat Grapes, Raymacker Peaches, Elrue Nectarines, Dr. Jules Guyot Pears and Lady Sudeley Apples, both very fine, Negro Largo Figs, &c. Mr. Read was again second. Mr. Goodacre had the best four varieties of Grapes, staging very good Madresfield Court, Black Hamburg, Muscat of Alexandria, and Muscat Hamburg Grapes. Mr. Read was second; his best bunches were Muscat of Alexandria and Madresfield Court. Mr. Goodacre was first with two highly finished bunches of Black Hamburg Grapes, and Mr. J. Swanwick was second. With two excellent bunches of white Muscat of Alexandria Mr. J. Goodacre was first, and Mr. J. Duncan, Bosworth Hall Gardens, Rugby, second. With any other black Grape but Black Hamburg Mr. Goodacre was first with two finely finished bunches of Muscat Hamburg. Mr. Duncan was second with Madresfield Court. Mr. H. Blakeway was first with six Peaches and also with six Nectarines, and Mr. J. Goodacre second in both classes. Melons were shown in two classes. Mr. Goodacre was first with Cherries in two classes. Gooseberries and other hardy fruits were also shown in their respective classes.

Mr. J. Hudson had the best collection of twelve dishes of vegetables, showing fine produce, and Mr. Read was second. Mr. Hudson was also first with two dishes of Potatoes. Peas, Vegetable Marrows, Onions, spring and autumn sown, Carrots, &c., were also shown in single dishes. In the cottagers' tent there was quite a display of cut flowers, hardy fruits, and vegetables, all generally of fine character.

The special prizes offered for vegetables by Messrs. Sutton and Sons, Reading, Harrison and Sons, Leicester, also for Sweet Peas, by Mr. R. Sydenham for Sweet Peas, by Mr. R. Pringle for vegetables, Messrs. Yarde and Co., Northampton, for Sweet Peas, &c., and others brought a variety of good exhibits.

Miscellaneous exhibits were dealt with in a liberal manner. Gold medals were awarded to Mr. W. Bentley, Leicester, for a very fine display of Roses tastefully set up in bunches; Messrs. Blackmore and Langdon, Bath, for an exceptionally fine collection of double and single Begonias; to Mr. W. B. Child, Acock's Green, for hardy flowers, forming a superb bank; to Messrs. W. and J. Brown, Stamford, for plants and flowers, Verbena Miss Willmott being in very fine character; and to Mr. F. M. Bradley, Peterborough, for decorative Sweet Peas, Carnations, &c. Silver medals were awarded to Messrs. Carnall, Holden,

Warner, Deverill, Pattinson, Harrison and Sons, Barron, The Ranelagh Nursery Co., E. Harris, and Mrs. Hodgkins, all for meritorious exhibits. Certificates of merit were awarded to Asparagus myriocladus, from the Ranelagh Nursery Co., Leamington; and to two new Sweet Peas from Messrs. W. W. Johnson and Son, Ltd., Boston, viz., Gladys Deal, a delicate blue-lavender, and Elfrida, creamy white striped with rose.

Bristol Gardeners'.

By the kind invitation of the Rev. G. F. Whidborne, this society held its monthly meeting at the Priory, Westbury-on-Trym, on Thursday last. About sixty members were entertained to tea by Mr. Whidborne, after which the company were afforded the opportunity of viewing the picturesque grounds and greenhouses, so admirably kept under the able management of Mr. Whitlock, the head gardener. The visitors were much struck with the cleanliness of the garden, lawns and pleasure grounds alike being well kept, while the absence of weeds was remarkable. Notwithstanding the bad season, the summer bedding looked exceptionally well, while the visitors took special notice of several rows of Sweet Peas showing good bloom. The greenhouses, too, were much admired. Amongst the plants in bloom were noticed some beautiful Torenias, Anthuriums, Begonias, while several Orchids lent a charm to their appearance with Cattleyas, Dendrobiums, &c., in excellent condition. Probably the most interesting to the visitors was a corridor wall 100ft long and 30ft high, covered with Zonal Geraniums, which is certainly not a sight seen every day. These, planted some thirty years ago, have thrived wonderfully, and are now one mass of bloom, which would puzzle the artist to paint, while the trusses of bloom are exceedingly large.

After the visitors had feasted their eyes on this sight of sights, the members adjourned to a large room in the garden, and proceeded with their meeting, when Mr. J. T. Curtis, gardener to Mr. W. Howell Davis, read a most practical paper on the Eucharis, he being the successful competitor for the prize offered by Messrs. Parker and Sons for the best essay on the subject. He dealt in an able way with the cultivation of these useful plants, composts, watering, feeding alike having his careful attention. His paper was an excellent one, and on the motion of the Rev. G. F. Whidborne he was accorded the congratulations of the society and himself. Mr. Whidborne then presented five R.H.S. medals for five members for regular attendance. Mr. Ellis Groves then proposed a hearty vote of thanks to Mr. Whidborne for his great kindness and for the utmost interest he has taken in the society, which was heartily received. This brought to a close a most enjoyable evening. Prizes for two bouquets of hardy flowers were awarded to Messrs. Ambrose (first) and Coombs (second).—H. K.

The Pith Moth.

(LAVERNA ATRA, Haw.)

Much damage is caused to fruit trees by the larvæ of the pith moth, but as the moth is not often seen, it is probable that few people are acquainted with it; although it occurs over a large area of England.

The damage done by the larvæ is particularly noticeable in nursery stock. They burrow up the terminal shoots and kill them, the result being deformed and stumpy trees. The attacked shoots flag and then die and turn brown, the dead masses varying from two to four inches in length. These dead shoots may remain for some time on the tree, or they may fall to the ground naturally, or be beaten off by heavy rain. The attack may readily be told from that of Red Bud Caterpillar by the absence of leaves spun together, and the absence of damaged buds and blossom; but the whole shoot dies away. Apple trees are chiefly attacked, but reports of its ravaging Pears have also been received. The larvæ are also found on Hawthorn and other wild Rosaceæ.

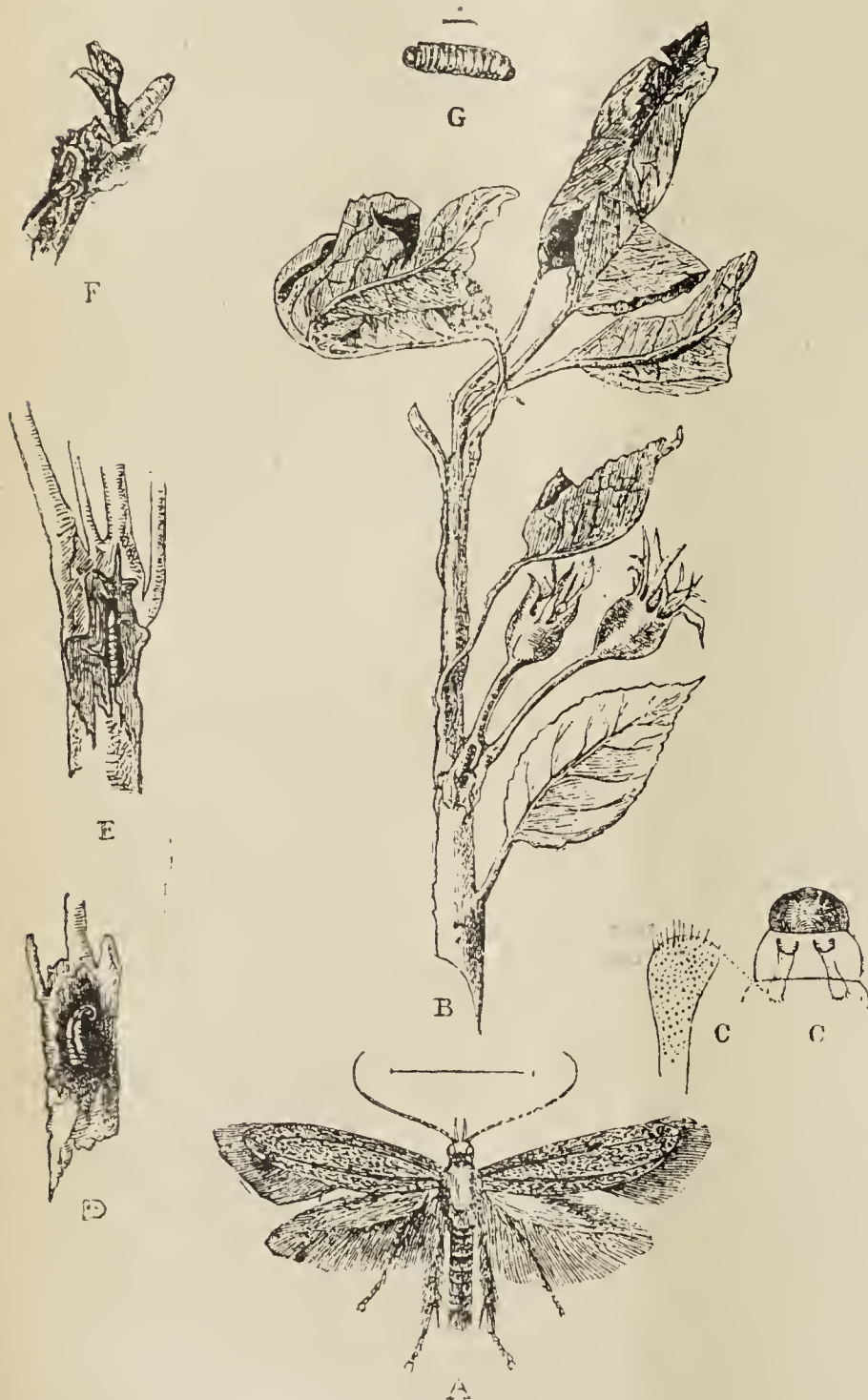
LIFE HISTORY.

This moth belongs to the group of small moths known as Tineinæ and to the genus Laverna. Its wing expanse is a little less than half an inch when fully expanded; the front wings are almost entirely black with white bars, but may be mottled with black, dark brown, and rusty brown; the hind wings are grey, and, like all Tineinæ, have long fringes. The head is almost entirely white. The colour is subject to much variation, some specimens being almost black. The moth appears in June according to Stainton, but all those that have been bred or observed appeared in July; and difference of locality no doubt accounts for a difference in the time of their appearance.

The eggs are apparently laid on the leaves; no definite observations have, however, been made. The larvæ feed first on the leaves; but, as winter approaches, and while they are still quite small, they bore just under the bark of a twig, or into the tip of a shoot, and remain there most of the winter. During January and February the larvæ tunnel right into the young shoots and

work up the pith (Fig E). In this tunnel the caterpillar lives until June; its presence does not prevent the leaves and blossom from unfolding, although later on they flag, turn brown, and die right off (Fig. B). These dead shoots if broken off will be found to contain the pith moth caterpillar or pupa, usually situated near the tip of a shoot.

The larva (G) is dull reddish-brown with a deep brown head and first segment; the other segments show more or less traces of pale brown spots, four in a row on the second and third segments, and four placed in a quadrangle on the remaining segments. The two front segments have two lateral spots, and the remainder a single lateral spot. The tip is deep brown. When mature the larvæ reach one-third of an inch in length and then pupate near the



The Pith Moth (*Laverna atra*).

A, Moth (magnified, line showing natural size); B, attacked Apple shoot, the upper portion shrivelling up and dying away; C, processes on pupa (magnified); D, pupa (magnified) in a shoot; E, larva (natural size) in a shoot F and G, larvæ (magnified).

apex of the shoot they have tunnelled. They reach their full-fed stage during the last two weeks in June.

The pupa (D) is of an ochreous hue; the head and front of the thorax and tip of the body mahogany red. It is cylindrical in form and about one-fourth of an inch long. On the under surface of the last segment but one are two blunt processes, separate and diverging outwards, hairy at their tips (Fig. C); the eyes are black and the wing cases and legs long, the former pointed. This stage lasts from two to three weeks, the moths emerging at the end of June or in July. The pupæ may sometimes be seen projecting from the dead shoots. Stainton says the larvæ also occur in Hawthorn berries in September, and that the black variety only is found in Apple shoots in February and March.

PREVENTIVE MEASURES.

It is quite obvious that there can be no remedy for this pest, but much can be done in the way of prevention by hand-picking the dead shoots before the moths emerge in June. This can only

be done, however, where small trees are attacked, and the attack is generally confined to such trees.

Late spraying with Paris green would probably prove beneficial, as it should kill the young larvæ, which seem to feed first of all on the leaves. The trees should be washed not less than four weeks before the fruit is gathered, but as soon as it is harvested a heavy spraying may be given. The time to spray, therefore, must depend on the variety of Apple concerned. This is certainly worth giving a fair trial, as beyond hand-picking nothing else can be suggested to check the increase of this pest, which has been so noticeable during the past few years.

Copies of the above in leaflet form may be obtained free of charge and post free on application to the Secretary, Board of Agriculture, 4, Whitehall Place, London, S.W. Letters of application so addressed need not be stamped.

THE BEE-KEEPER.

Re-Queening.

Success in bee-keeping depends largely upon good stock and plant, more particularly upon the former, and bee-keepers cannot fall into a greater error than that of tolerating old queens. It is all very well to harp upon the fact that it is only from the most powerful colonies that the best results are obtained, but the salient point is overlooked, i.e., that young prolific queens are essential to the production of such stocks. Every practised apiarist will admit that stimulative feeding in order to worry a failing queen to lay rapidly is utterly useless, as the bees will simply store the syrup in the brood nest, because the queen fails to respond to the stimulation and fill the cells with eggs. It is impossible to get a strong colony from a failing queen by any device. If a queen is laying well in the autumn of her second year, and has maintained a large population throughout the season, to purchase a queen to supersede her is apparently a nonsensical waste; but is it?

For 5s. or thereabouts a specially bred young and prolific queen may be bought in the autumn, and if she is introduced prior to feeding up for the winter she will generally fill the brood nest with eggs.

These are the bees which winter well, and the inhabitants of the hive being more numerous maintain the heat of the cluster better; consequently the consumption of food is reduced, and in proportion to the space the young bees can cover in the spring, so will the young queen lay eggs and extend the brood nest. The quantity of brood raised will be greater, the colony will thus be ready for supering earlier, and if there is sufficient food given in the autumn will not require feeding, and in most cases will yield double the quantity of honey. There is thus economy of labour and food, and the increased harvest pays for the queen over and over again.

On the other hand, if the old queen is left to pass the winter at the head of the colony, it often happens that, although she was accomplishing so much the previous year, she will not survive the winter. If she does, she will be found the following spring with a very meagre population, having been unequal to the task of rapid ovipositing in the early part of the year, and unfit for anything further. This can have but one result, viz., the loss of part, or all the season's honey; as the bees, finding the queen failing, naturally attempt to supersede her. In the meantime the population is rapidly dwindling away, having no hatching brood to replace the heavy mortality in the spring. Should the apiarist find out the state of things, he remedies it by purchasing a queen at a higher price than would have been the case the previous autumn, or the stock dies out altogether.

Now that it is understood why it is necessary to re-queen some colonies at least in an apiary each year, a little advice is necessary as to purchasing queens. The qualities of the different strains must not be overlooked, as breeding intensifies and concentrates good and bad points. The more observant will have formed an opinion as to what kind of bees they require, which will be the most profitable from all points of view. By procuring them from good breeders the best of stock can thus be obtained at a minimum cost. Most queen breeders, when asked, will give advice as to what kind they recommend. There is necessarily discrimination required in selecting queens and drones with reference to the qualities they possess, and which it is desired to perpetuate in the progeny.

It is by hybridisation and acclimatisation, or what Mr. Darwin calls natural selection, that we have undeniably improved our natives. Nature, however, does not produce the Durham ox or the racehorse; but science, by imitating Nature, may bring about similar modifications in bee life. The necessary qualities are uniformity of temper, energy, prolificacy, and hardiness.—E. E., Sandbach.



Hardy Fruit Garden.

STRAWBERRIES: PLANTING.—Early rooted runners may now be transferred to permanent positions where they can soon take root and make progress, forming bold crowns by the close of the autumn, or the end of the growing period. These will thus stand a fair chance of fruiting well next season. This is the main object of early planting, but it cannot be achieved unless the runners have been specially prepared by taking them in hand some weeks since, and inducing them to root into small pots, from which they may be readily turned with a good ball of roots and soil, which should not be so pot-bound as to need much disturbance, other than loosening some of the lower rootlets. Previous to planting the soil must be kept moist; indeed, from the time of securing the runners on the soil surface, moisture must never be wanting. The ground must be well prepared by digging deeply and enriching with manure, well incorporated, finally making it firm previous to placing out the plants. Plant in rows not less than 2ft apart, the plants being 15in to 18in asunder. Insert them, if possible, when the surface soil is dry; the work is then carried out much more readily and the soil made firm about them. A few applications of water, as necessary, must be supplied until the plants are established.

TREATMENT OF ESTABLISHED BEDS.—Having made provision for securing all the runners required either by layering into small pots or into the soil between the rows, the rest should be regarded as superfluous, and the sooner they are cut off the better. With the presence of runners it is impossible to keep down weeds. The removal of both may be effected, thus affording plenty of light and air to the main plants, and the soil freed of growths, which tend to exhaust the nutriment in it. Beds of plants which have been longer than three years on the ground ought not to be retained. Spring planted beds ought to have the runners removed early.

SUMMER PRUNING.—Many fruit growers favour the present time rather than an earlier period for the work of shortening the side or foreright shoots of trained trees. The advantages of early August pruning are the more mature condition of the shoots, whereby, after the shortening, there is not the possibility of secondary growth from the lower buds. Should there be any it will take place from the upper buds, a length of shoot containing four to six leaves being left. The leading shoots of bush and pyramid trees must not have more than one-third removed. Bush and pyramid, wall and espalier Apples, Pears, and Plums may be dealt with. Besides shortening, summer pruning may consist of thinning out, for where shoots are crowded it is obviously of advantage to give relief by removing the least necessary. After crops of fruit have been gathered there will be on trees that bear fruit on the annual wood shoots to be dispensed with. These may usually be cut out, their place taken with successional shoots, while weakly or any for which room cannot be found may be cut out also. Peaches, Nectarines, and Morello Cherries may be dealt with in this manner. Sucker growth of any kind springing from the roots of wall or trees in the open must be cut out.

THINNING FRUIT.—The advantages following on the thinning of fruit are usually on the side of larger fruits of superior quality on the one hand, while on the other the trees are afforded a welcome relief from carrying an overburdening crop should they be at all old or tending to lessened vigour. The developing and perfecting of a crop of fruit tells largely upon all trees, and the aim of the grower must be to balance as equally as possible the production of healthy wood, at the same time benefiting the fruit. Trees or bushes in the first flush of vigour may be allowed to carry more fruit than an older specimen, because they are able to do justice to a larger number, and at the same time curb the exuberance of wood production. There is still time to lessen the number of fruits on all trees which ripen their crops in autumn. Stone fruits are especially benefited by judicious thinning, leaving, as a rule, one fruit to each square foot on Peaches and Nectarines. Heavy bunches of Plums should have the fruits reduced in number, while to have fine and well coloured Apples and Pears one fruit to a spur is sufficient. Ill-placed or deformed fruits should be noted at an early stage and removed.

SUMMER THINNING RASPBERRIES.—Raspberry stools usually produce a larger number of canes than it is desirable to retain. A selection, therefore, ought to be made of the most suitable young canes for future fruiting. Four to six will be found to be ample, these being of medium to strong vigour, the rest being cut out. The crop of fruit from the old canes

having also been gathered, these are of no further use, and must be removed. Short sucker growths round the stools fork out, but those at a distance away may remain, if canes are likely to be wanted for new plantations. At present train in no canes to the wires or stakes, as they will ripen much more readily by hanging free, so that sun and air can circulate among them.—EAST KENT.

Fruit Forcing.

CHERRY HOUSE.—The trees are now ripe in wood and plump in bud. The leaves, too, will not be capable of much further effort in elaborating the sap and storing food in the adjacent buds and wood, therefore any undue excitement will cause the trees to start into growth, which must be guarded against by exposing the trees to atmospheric influence as far as the house will admit. The border must not be allowed to become dry, but have copious supplies of water, and if the trees are weak afford liquid manure. To subdue red spider give an occasional washing with the garden engine or syringe, but by all means remove the roof lights, the cleansing influence of rain and invigorating tendency of dew, with the thorough moistening of the border, having a beneficial effect. Black aphides are very troublesome on the young growths of Cherry trees, but the leaves and wood of this season, from their hard texture, are not inviting to them; yet if they appear promptly use tobacco water, the narcotic being fatal to these hard-to-be-killed insects. Cherry trees in pots are the most interesting of all fruits grown that way, and offer a variety and afford fruit over a long period, that it is remarkable they are not more generally grown. With slight forcing they ripen to fruit in May; in unheated houses the fruit ripens in June. Trees in pots must be regularly watered and syringed to maintain them in health.

PEACHES AND NECTARINES: EARLIEST FORCED TREES.—In houses started in December or January the trees will soon part with some of the foliage, but it must not be accelerated by the roots being deprived of moisture, for it is imperative that the soil be kept moist, yet not saturated. Dryness will cause the buds to drop, and soddenness of soil induce premature growth, both of which must be guarded against. As a safeguard against starting the buds, allow such lateral extension as is necessary to appropriate any excess of sap, a few green laterals doing that perfectly. Early forced trees do not usually make strong growths, and they form far too many blossom buds; therefore the pruning needs to be carefully performed, as many shoots are mainly studded with that description of buds, with wood buds at the base and extremity only, and it is necessary to retain a wood bud at the latter point, not cutting back next year's bearing wood unless the shoots are of great length, and then to a wood bud.

Where disbudding has been properly attended to, no more wood being retained than is required to replace the bearing shoots of the current year and to renew worn-out growths, as well as to supply the wood for extending the trees, very little pruning will be needed. Weakly trees require the smaller growths cut out, so as to impart more vigour to those retained, for the weak shoots afford much smaller fruit than the moderately vigorous and well-ripened growths. Some trees grow too vigorously, and must be lifted to induce a sturdy fruitful habit. Weakly trees should have the old soil carefully removed from amongst the roots, supplying loam of a calcareo-argillaceous nature. Give a good watering both to the lifted trees and to those that have had the soil renewed about the roots. These operations require to be performed as soon as the leaves are mature, and before they fall from the trees, syringing the latter and shading whilst the work is in progress, and for a few days afterwards if the weather is bright.

SUCCESSION HOUSES.—As the fruit is cleared from individual trees cut away the shoots that have borne fruit unless required for extension, and all the shoots where the growths are too crowded should be thinned. This will allow of cleansing operations being more effectively performed, it being imperative that the foliage be kept clean and healthy. With the free access of light and air the buds will form perfectly, and the wood ripen thoroughly, provided attention is given to a due supply of water at the roots. The house will need ventilation day and night, and where the roof lights are movable and the trees not very vigorous they may be removed when the buds are plumped. Where the fruit is ripening a free circulation of air will enhance the quality considerably, supplying sufficient water to keep the foliage in good condition, and securing air moisture by damping the paths and border in the morning and afternoon, as an arid atmosphere favours thrips and red spider and the premature ripening of the foliage. Dryness at the roots also favours these pests, tends to the fruit ripening unduly, and may render it mealy and flavourless. A slight shade is sometimes beneficial when the sun is powerful and the apex of the fruit fully exposed to its rays beneath large panes of glass, to prevent the fruit ripening too quickly and becoming discoloured at the apex, or when it ripens in excess of the demand. Ants are sometimes very troublesome on such fruits, especially Nec-

tarines, eating into the choicest at the apex. Poisons are not safe to use at such times. The only suitable means of riddance is to take small pieces of dry sponge between the fingers and dip them thus held in treacle, relaxing the pressure so that this will be absorbed by the sponge, then remove and with a gentle squeeze free the sponge of the excess treacle, placing the bowls or saucers level with the edge in the soil in their runs, or near their haunts; and when the ants are feeding lift and drop the sponge into boiling water. Another plan is to place some partially picked bones, such as come from table, in their haunts, and when they are feeding on the meat place them in boiling water. The bait should be dried before using again, and this persisted in will soon clear a house of the ants.

LATE HOUSES.—The wood should be laid on thinner than is customary with trees in earlier houses, so as to give it a better chance to ripen, and the foliage advantage to assimilate food and store it in the wood; whilst the buds are perfectly formed. Attend, therefore, to thinning and regulating the growths. Gross shoots tend to impoverish the weaker, appropriate an undue amount of sap, prevent an equal distribution of the nutriment, and are seldom fruitful. They mostly fall a prey to gum disease, and are best removed in favour of less exuberant growths, striving to secure an even spread of moderately strong short jointed wood. Ventilate freely in the early part of the day; allow a good heat from the sun during the day, and close in good time, so as to run to 85deg or even 90deg. This will only be necessary where the fruit is required accelerated in ripening. Sun heat will not do any harm after evaporation has been going on for some time, but it is desirable to admit a little air before nightfall, to allow the pent up moisture to escape, and the gradual cooling of the house will insure rest. Early ventilation and consequent elaboration of the sap is necessary for the solidification of the growths. Forceful syringings will keep the trees free from red spider, and should be continued until the fruit commences to ripen. Keep the borders well, but not excessively, supplied with water or liquid manure, mulching the surface with short sweetened manure.—ST. ALBANS.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
1903. July.		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
Sunday ...19	S.W.	deg. 62.9	deg. 59.4	deg. 67.6	deg. 55.5	Ins. 0.02	deg. 63.4	deg. 61.5	deg. 58.2	deg. 50.1
Monday ...20	N.E.	57.2	55.3	64.4	55.9	—	63.0	61.3	58.2	53.3
Tuesday ...21	S.E.	59.6	56.8	70.5	47.5	0.02	61.3	61.0	58.4	39.5
Wed'sday 22	S.W.	64.5	61.2	73.2	49.5	0.01	63.2	61.2	58.4	40.9
Thursday 23	S.W.	64.6	59.7	66.9	54.0	1.20	63.5	61.2	58.4	46.1
Friday ...24	S.W.	56.1	54.4	70.2	54.0	0.01	62.2	61.2	58.4	53.4
Saturday 25	S.W.	66.2	57.8	70.4	45.5	0.72	61.8	61.0	58.4	38.5
MEANS ...		61.6	57.8	69.0	51.7	Total. 1.93	62.6	61.2	58.3	46.1
Sunday ...26	S.W.	deg. 61.2	deg. 60.4	deg. 70.2	deg. 57.8	Ins. 0.15	deg. 63.0	deg. 61.0	deg. 58.4	deg. 56.9
Monday ...27	S.W.	62.3	57.0	63.5	46.2	0.15	62.1	61.0	58.4	39.2
Tuesday ...28	S.W.	61.2	57.2	64.6	55.2	0.27	61.9	60.8	58.4	47.7
Wed'sday 29	S.W.	58.2	56.0	66.4	55.3	0.39	61.2	60.8	58.4	49.5
Thursday 30	S.W.	60.7	55.9	66.7	51.9	0.02	61.5	60.8	58.4	44.6
Friday ...31	W.N.W.	56.7	52.5	62.4	53.9	—	61.2	60.6	58.4	47.0
Saturday 1	S.W.	61.6	58.2	70.2	53.3	0.02	60.5	60.2	58.4	43.8
MEANS ...		60.3	56.7	66.3	53.4	Total. 1.00	61.6	60.7	58.4	47.0

From July 19th to 25th, a week of dull weather, with rain on six days; and also from the 26th to August 1st, the weather has been dull and cool, with rain on six days. Total rainfall for July, 3.95 inches.

Trade Catalogues Received.

T. Methven and Sons, Leith Walk, Edinburgh.—Bulbs.
John Peed and Son, West Norwood, London.—Bulbs.

TRADE NOTICE.—The contract for supplying the whole of the parks and cemeteries of Bradford with bulbs, forcing plants, herbaceous plants, sundries, &c., for the ensuing twelve months has been given to Mr. F. C. Edwards, nurseryman and seedsman, Leeds.



* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

GRUBS ON STALKS AND ROOTS OF CABBAGES (N. H. S.).—The reply to your query will be found on page 121.

DURATION OF FRENCH RANUNCULUS (Hortus).—The roots will endure indefinitely if taken up as soon as the leaves ripen and turn yellow after flowering is over, drying and storing away in a dry airy compartment, in drawers, or suspended in paper bags until planting time again arrives. This is best done towards the end of February, should the weather permit, and being properly planted and well attended to, there is practically no limit to the duration of the roots, the plants being given fresh soil or new beds from time to time.

PEACHES AND NECTARINES FALLING OFF (E. G.).—The two fruits each of Peach and Nectarine have been cast through defective stoning. Though the stone in all the four samples was completely formed and hard, the kernels were very small, shrunk, and defective, and this is the real cause of the fruit falling off. One of the Nectarines had also split, a matter that has not been satisfactorily explained, being attributed to imperfect fertilisation, which is somewhat confirmed by the defective state of the kernels, which are devoid of embryos; hence, useless as means of continuation by seed, this being Nature's definite law, not man's sole or chief concern about flesh. The best aids to avoiding stone splitting and casting of the fruit in stoning, or at its should-be completion, is carefully lifting the trees and replanting them in rather strong loam, to which has been added a sixth of old mortar rubbish, keeping the roots well up to the surface, and making the soil firm under, about, and over them. This should be done as soon as the leaves give indications of falling, and done carefully. The trees not being very old, this will not prejudice the next year's crop. It would also be well to have recourse to fertilising the blossoms, especially cross-fertilisation.

TOMATOES NOT SWELLING (J. C.).—The fruits, a quarter to half-swelled, are seedless, which is the only cause of their not swelling that we can discover. In the United States it is said that Tomato cultivators have succeeded in growing Tomatoes without seeds, greatly to the increase of the quality of the fruit in sugar, and as a safeguard against appendicitis; but if like yours we question their utility, and it is difficult to see how the supply of plants is to be maintained. All the fruits in your case are without evidence of seed, and to insure their further swelling it is likely that phosphate of potash, ½oz to a gallon of water, would be the most serviceable, increasing as we suspect the quantity and quality of the fruit. This may be supplemented about once a week with nitrate of soda, ½oz to a gallon of water, or the two substances may be used together in the proportion of three parts phosphate of potash and one part nitrate of soda, using ½oz. of the mixture per gallon of water. Or form a mixture of three parts superphosphate, one part sulphate of potash, and half a part nitrate of soda, using ½ to 1oz of the mixture to a gallon of water. In order to have the fruit swell properly, it would be advisable to carefully fertilise the blossom, having recourse to cross-fertilisation in order to effect thorough fecundation.

USING KAINIT, SUPERPHOSPHATE OF LIME, AND NITRATE OF SODA FOR CELERY, CHRYSANTHEMUMS, AND VINES (F. L., Hants).—It is not, as a rule, advisable to use kainit during the growth of the plant, but is best mixed with an equal proportion of superphosphate, and applied some time in advance of cropping, or in autumn for Vines and fruit trees, following with nitrate of soda in the spring, or when the plants are starting into growth. Of the mixture of superphosphate and kainit 3½lb may be applied per rod, and dug in in autumn or early spring, and after the sown or set plants are up or established, or fruit trees starting into growth, apply finely crushed nitrate of soda at the rate of 1½lb per rod. As you have used farmyard manure for the Celery, you may sprinkle nitrate of soda alongside of the plants, not over them, in the trenches, about ½oz per yard run of trench, and repeat this occasionally, say at intervals of three weeks up to the time of first earthing. For the Chrysanthemums you may use the nitrate of soda in liquid form not stronger than ½oz to a gallon of water, and not applying oftener than once a week, commencing after the bloom buds have been thinned, not before. For the Vines it may be supplied also in liquid form and weak, as an aid to swelling of the Grapes; but the value of nitrate of soda is proportionate to the amount of phosphoric and potassic elements present in the soil in available form. If the kainit be of good quality you may form a useful mixture for most crops of three parts superphosphate, two parts kainit, and one part nitrate of soda, not applying more of the mixture than 4oz per square yard.

WISTARIA DYING (An Old Subscriber).—It is rather uncommon for large plants of this very handsome climbing deciduous shrub to die off; but they are sometimes attacked on the stem and at the roots with a cankerous affection not unlike canker in Apple trees, which girdles the stem, and the top, in consequence, collapses. Probably the disease is caused by the fungus gaining access through a wound, and then lives in the tissues between the bark and wood, and gradually extends circumferentially and girdles the stem or limb, and the part above collapses. A similar disease also attacks Virginian Creeper, but in the case of both Wistaria and that plant the occurrence is not common, there being very fine examples extant that are much older than thirty years, and covering very large areas of wall. Probably, if you examine the rootstock, you will find evidence of the cause of the mischief.

TOMATOES DECAYED (H. J. K.).—The fruits are affected by the Tomato rot (*Maerosporium tomato*), the fungus being often extremely destructive, both under glass and outdoors. The disease is usually first noticeable when the fruit is about half-grown, and commonly appears at the blossom end as a small blackish spot, though the disease appears in bad cases, such as yours, at the sides and almost all over the fruit. The tissues beneath the spot or spots are destroyed by the fungus, so that the affected parts become depressed or sunken, and the inside of the Tomato is blackened. The disease, in this instance, is evidently caused by spores that alight upon the fruit, the germ-tubes of the fungus penetrating through the skin, and the mycelium forming in the flesh. In many cases the infection can be traced to the blossom, the spores of the fungus alighting upon the bloom, either when expanded or after it has faded, and in the dead tissue the mycelium forms and spreads to the fruit. Doubtless the disease is favoured by the decayed bloom being left sticking upon the fruit, where spores are probably produced, and these find a favourable medium for germination in the moisture of the atmosphere condensed upon the fruit, as frequently happens from a rise in the temperature of the house after a cold night, air not being given sufficiently early to allow of its disposition before the sun acts powerfully on the houses. This moisture is unquestionably a contributory cause of black spot, as excess of moisture in the house favours the germination of the fungoid spores. The removal of the dead blooms from the fruit is a great help in preventing the disease, the bloom dropping readily the day after it has faded by tapping the plant, or its support, or the footstalk of the fruit, admitting air freely and maintaining a genial warmth in the hot-water pipes, keeping water from the fruit. All diseased fruits should be collected and burned, and to prevent further mischief the plants may be sprayed with potassium sulphide solution, 1oz of the sulphide to 3 gallons of water, in which 1oz softsoap has been dissolved, repeating at intervals of ten days or a fortnight.

NAME OF FRUIT.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (H. D.).—Scarlet Golden Pippin.

NAMES OF PLANTS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (R. A. C.).—*Adiantum Williamsi.* (T. Seeaney).—*Zenobia speciosa.* (W. B. R.).—1, *Silene Armeria*; 2, *Centranthus ruber.* (H. H. T.).—2, *Philadelphus coronarius*; 3, *Phyteuma spicatum*

Covent Garden Market.—August 5th.

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2	0 to 0	Leeks, bunch	0	2 to 0 2 1/2
„ Jerusalem, sieve	1	6 0 0	Lettuce, Cabbage, doz.	1	0 0 0
Batavia, doz....	2	0 0 0	Mushrooms, forced, lb.	1	0 0 0
Beet, red, doz.	0	6 1 0	Mustard & Cress, doz.		
Cabbages, Spring, tally	2	0 3 0	„ punnets	1	6 0 0
Carrots, bunch	0	2 0 0	Onions, bushel	3	0 0 0
„ new, bnch.	0	6 0 8	Parsley, doz. bnchs.	2	0 0 0
Cauliflowers, doz.	4	0 5 0	Potatoes, cwt.	6	0 8 0
Corn Salad, strike	1	0 1 3	„ Jersey, new, ewt.	14	0 15 0
Cos Lettuce, doz....	1	0 0 0	Radishes, doz.	0	9 1 0
Cucumbers doz.	3	0 4 0	Spinach, bush.	2	0 0 0
Endive, doz.	1	6 0 0	Tomatoes, English, lb.	0	6 0 7
Herbs, bunch	0	2 0 0	Turnips, bnch.	0	0 0 2
Horseradish, bunch	1	3 1 6	„ new, bnch.	0	5 0 6

Average Wholesale Prices.—Plants in Pots

Most of the undermentioned plants are sold in 48 and 32-sized pot

	s. d.	s. d.		s. d.	s. d.
Aralias, doz.	5	0 to 12 0	Geraniums, doz.	4	0 to 6 0
Araucaria, doz.	12	0 30 0	„ Ivy, doz.	6	0 8 0
Aspidistra, doz.	18	0 36 0	Grevilleas, 48's, doz.	5	0 0 0
Crotons, doz.	18	0 30 0	Heliotrope	6	0 8 0
Cyperus alternifolius			Hydrangeas, pink	10	0 12 0
doz.	4	0 5 0	„ white	10	0 12 0
Dracæna, var., doz.	12	0 30 0	Lycopodiums, doz.	3	0 0 0
„ viridis, doz.	9	0 18 0	Marguerite Daisy, doz.	6	0 9 0
Eriæa Cavendishi...	18	0 24 0	Myrtles, doz.	6	0 9 6
„ candidissima	18	0 21 0	Palms, in var., doz.	15	0 30 0
Ferns, var., doz.	4	0 18 0	„ specimens	21	0 63 0
„ small, 100...	10	0 16 0	Pandanus Veitchi, 48's,		
Ficus elastica, doz.	9	0 12 0	doz.	24	0 30 0
Foliage plants, var, each	1	0 5 0	Pelargoniums	8	0 0 0
Fuchsias, doz.	6	0 8 0	Shrubs, in pots	4	0 6 0

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, Italian, per pad	6	0 to 7 0	Oranges, ease	10	0 to 20 0
Bananas	10	0 15 0	Pines, St. Michael's	3	6 5 0
Cherries, 1/2-sieves...	15	0 20 0	Strawberries, South-		
Grapes, Hamburgh	1	0 1 6	ampton, per bskt.	0	0 0 0
Lemons, Messina, case	10	0 15 0			

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.
Arums, doz.	2	0 to 3 0	Marguerites, white,		
Asparagus, Fern, bnch.	1	0 2 0	doz. bnchs.	3	0 to 4 0
Carnations, 12 blooms	1	0 1 3	„ yellow, doz. bnchs.	1	6 2 0
Cattleyas, doz.	10	0 12 0	Myrtle, English, bunch	0	6 0 0
Croton foliage, bun.	0	9 1 0	Odontoglossums	4	0 5 0
Cycas leaves, each	0	9 1 6	Orange blossom, bunch	2	0 0 0
Eucharis, doz.	2	0 3 0	Pyrethrum, double,		
Gardenias, doz.	2	0 2 6	doz. bun.	4	0 5 0
Geranium, scarlet, doz.			Roses, Niphetos, white,		
bnchs.	4	0 5 0	doz.	1	0 1 6
Gladiolus, The Bride,			„ pink, doz.	2	0 3 0
doz. bun.	4	0 6 0	„ yellow, doz. (Perles)	1	6 2 0
Iris, Spanish, doz. bun.	6	0 8 0	„ Liberty, doz.	2	0 4 0
Ivy leaves, doz. bun.	1	6 0 0	„ Generals	1	6 2 0
Lilium Harrisii	2	0 3 0	Smilax, bunch	4	0 5 0
Lily of Valley, 12 bnchs	9	0 12 0	Stephanotis, doz.	2	0 2 6
Maidenhair Fern, doz.			Violets, doz. bun.	2	0 2 0
bnchs.	4	0 5 0	„ Marie Louise	2	0 3 6



Notes.

In considering the events of the past week several topics present themselves to us as being of more or less interest to the farming community. Since St. Swithin came in we have had rather more than our share of rain. There are no little Apples this year ready for christening, and we can only lament that this good growing forcing season is of no interest to us who have Plum or Apple orchards. For the Raspberries the rain came too late, and now, just when we wish to gather, the small berries are saturated with moisture.

The belated haymakers have but a sorry prospect, and their expenses will be heavy and the value of their crop is lessened, so that they are losers all round. Professor Wrighton has had a high old time. Listen to what he says of doings at Downton: "Twenty days hay carting without any interruption from weather is an extraordinary achievement, but was accomplished this extraordinary year. Much of the hay was secured without a drop of rain, and only suffered, if at all, from being rather too dry. The bulk of the crop is uniformly heavy, and probably averages 1½ tons per acre." Whatever the Professor's feelings may be, we are thankful we are not responsible for the safe ingathering of nearly 200 acres of hay—i.e., grass and Clover. What the wear and tear must be in a catchy season is not calculable.

This droppy weather is all in favour of the Turnip crop, so we may hope to see plenty of good keep to land us through the winter months.

As reports come in from one part and another, it is curious to note how in the small area of this island the weather has varied in such a remarkable degree: floods here, drought or nearly so there; but whatever else has been irregular, cold nights have been pretty universal. We almost think we have got about enough rain for the Potatoes. These smudgy days are exceedingly favourable to baneful growths, and more than one up-to-date grower (we do not mean of that Potato in particular) has been busy with the sprayer. The Potato sprayer seems to have come to stay. We do not hear much now of spraying Charlock. The results were so divergent and the cost was apt to mount up. Charlock is tough stuff to deal with, and we still hold the belief of our younger days that nothing beats hand pulling; but where are the women and children? Yes, and this lack of children is blamed for another evil, the increase of the sparrow pest—no time for bird-nesting, all

time in school. At any rate, the birds have multiplied to an alarming extent, and one has only to visit any cornfields of early variety or contiguous to a village or homestead to see the utter ruin that sparrows will cause in a very short time. One farmer writes to the local press urging that some measures (stern ones) be taken for their extermination, but considers this a case for co-operation; all parishes in a district must unite. We are not quite sure of this ourselves, as we are doubtful if the sparrow is a migratory bird. We do not mean by this a summer visitant. We wonder if any naturalist can tell us how far a sparrow will go in search of food; we have never heard the question raised. Of sparrows in relation to the small fruit crops, we know of two gardens not a mile apart, where in one the trees, unprotected by wire, are absolutely bare of fruit, and in the other, under an immense cage, the fruit can be estimated by the stone. According to some authorities, the protected trees should be covered with filth, i.e., caterpillars and so forth. So far from this being the case (not only this year, but for many past), the trees are as clean and healthy and free from insect pests as possible. This goes a long way to prove that as insect eaters sparrows are a great fraud.

We are beginning to hope that this year will see us with a plethora of straw, a most comfortable and pleasing state of things. An old farmer, a man of many acres and great experience, was telling us last week that the lack of straw was the real reason of the outcry for allotments among the working men. It was not the extra work they wanted, but it was the comfort of clean bedding for pig and possible cow, and for the safe housing of their Potato crop. It had been his plan to give straw freely, and his labourers were not men who were for ever crying for a bit of the moon or its equivalent in the shape of the best field in the lordship.

We have just looked over the returns (Government) as they affect allotments and small holdings. A good many of us can remember what a stew there was when these Acts became law—how they were going to solve the great problem of "back to the land." How no man who was wishful for an acre or two should sigh in vain. How intensive agriculture was to be the fashion, and what a vast impetus would be given to the fruit, vegetable, and poultry industries. There was also another side to the picture, namely, the discomfiture of land-holders when compelled to "stand and deliver" their best and nearest (to the village) close. We remember the situation was very acute in our own village, where one John Hampden set his mind on two particularly good fields, quite the pick of the farm in which they were included. Party feeling ran high. That particular farmer was not popular, and we fear there was more than a latent hope that he would have to disgorge. However, moderate counsels prevailed, and a close of school land was eventually set aside for the purpose of further allotments, and the grumbler ceased from troubling. We may add, after all the pother several of the allotments were for a long time tenantless, and then were only cultivated by pluralists, just bringing about the same wicked state of aggrandisement with which the large farmers had been charged! Can we accept five years as a long enough period in which to test a movement? We think we fairly may do so, and when, therefore, we turn to the report and learn that during five years about 3,783 acres have been acquired for allotments out of all the broad acres of England and Wales, we begin to wonder why all the commotion was made.

The number of local authorities who took action for providing allotments was 324; the claims were allocated thus: Bedfordshire, 56; Berks, 4; Bucks, 178; Cambridge, 30; Cornwall, 27; Cumberland, 5; Devon, 77; Dorset, 123; Ely, 165; Essex, 51; Gloucester, 40; Hereford, 4; Hertford, 103; Kent, 61; Leicester, 24; Lincoln, 234; Middlesex, 82; Norfolk, 783; Northampton, 16; Oxford, 41; Shropshire, 9; Somerset, 88; Southampton, 122; Suffolk, E., 112; Suffolk, W., 7; Surrey, 57; Sussex, E., 20; Sussex, W., 24; Warwick, 52; Wilts, 119; Worcester, 131; Yorks, 212. We are surprised at the place Norfolk takes on the list as first. Possibly this is owing to the fact that the land is really most suitable for small cultivators, fairly light, and easily worked. We are surprised to see so small an acreage in Cambridge and Cornwall, for we thought both these counties were peculiarly adapted for the cultivation of Potatoes and flowering bulbs, both of which meet with ready sales. The land acquired for small holdings during the same five years is just 100 acres (!), of which

Lincoln (Holland division) takes 46; Sussex, 42; Plumstead, 8; Bristol, 4.

Local authorities have also acquired land for burial grounds, recreation grounds, and sewage farms up to 710 acres. We do not for a moment say the Act is unnecessary, but we do say we expected to see greater results. We heard only to-day of certain allotments belonging to the Dean and Chapter of —, which for years and years have been entirely devoted to the cultivation of Leeks. The rivalry is something tremendous, and so are the Leeks, and the growers are kept up to the mark by annual exhibitions, where honours are dearly sought.

Just in this immediate neighbourhood our allotment holders are more for Potatoes than any other product, and are most enterprising in their endeavours to get good new varieties, and they expect to pay, and do pay, some very stiff prices for a novelty. One novelty, an expensive one, has proved its value in rather an unexpected way. On June 29 a very sharp frost visited this district, and all Potatoes save this one were blackened. It is to be hoped we shall not often have a frost so late as the end of June, but really nowadays the most unexpected things do happen. The mercury in the thermometer jumps up and down the tube as if bewitched. We had far warmer days last January than we had in April and May, and the frost that failed us at Christmas comes to us in June.

We notice some wise man has been suggesting that the Scottish deer forests should, in the face of our growing demands for meat, be again devoted to sheep and cattle. We fear if every deer forest were at once stocked with sheep there would be no very perceptible fall in the price of mutton. As deer forests, we are inclined to believe these practically sterile tracts of country are the cause of a very much larger circulation of the current coin of the realm than ever they were under the old régime.

There is just one other point: the Board of Agriculture is in the habit of publishing from time to time leaflets that treat of matters of moment. These leaflets are gratuitously distributed, but who gets them? We fear not the people who most need them. We doubt if the average small farmer knows of their very existence. Occasional mention is made of them in the columns of the local weekly paper, but we never see them in the homes of small occupiers. Could not some better means of distribution be devised?

Work on the Home Farm.

We have been very fortunate to have got all our hay so well, for the weather is now thoroughly broken, heavy rain falling every day. Already the mown fields have assumed a green hue, and in many of them the aftermath has made considerable growth.

The root crops are romping away so quickly that the hoes can hardly keep pace with them. Weeds have been very difficult to kill, the land is so moist, and both weeds and small Turnips are far too numerous between the rows. There will be a good deal of horsehoeing before they can all be wiped out. Big weeds and Turnips, too, are very tenacious of life in showery weather. The rain is favourable to Turnips and Potatoes, but the best crops of corn are having sadly too much of it. Up to a week ago very little laid corn was to be seen, and the string binders were promised an easy task, but there has been a great alteration, and much Barley, as well as Wheat, is laid flat. Fortunately, it is not twisted about, but is laid nearly all one way, which will make reaping easier.

We are glad to see that the Sheep Scab Bill has passed through committee. A systematic and compulsory system of dipping is the only means whereby we can get rid of the scab. Outbreaks almost invariably originate where farmers are too shortsighted, and mean to spend money on reasonable safeguards. This is a sheep district, and dipping is seldom neglected. At the present date sheep which have not been recently dipped would be very difficult to find in farmers' hands. Not so with butchers and cattle dealers, who are very negligent. We know a butcher who leaves his sheep unseen for a week together. Such a man would never think of dipping.

As calving cows are not desirable articles about May day, the bull which has been grazing with the cows and heifers should now be brought up, and put in a small yard or loose box. There are plenty of Tares and Clover for him, and he will be fed on those green foods for the present.

Harvest will be very near in a fortnight, but there is plenty of time to get the harness and gearing looked over and repairs made good. Saddles, pads, and collars should be attended to, for it is bad management to have a necessary repair pointed out by a sore shoulder or back.

ESTABLISHED 1832.

No connection with any other firm of a similar name.

Successors to the late BARON VAN PALLANDT.

ANT. ROOZEN & SON'S

CATALOGUE for 1903
of *SPLENDID*

DUTCH, CAPE, AND EXOTIC BULBS

(With CULTURAL DIRECTIONS)

Is NOW READY, and will be sent Post Free on application to themselves direct at OVERVEEN, HAARLEM, HOLLAND, or to their General Agents—

Messrs. MERTENS & CO.,
3, CROSS LANE, LONDON, E.C.

ORCHIDS.

CLEAN HEALTHY PLANTS AT LOW PRICES.

Always worth a visit of inspection. Kindly send for Catalogue.

NEW LIST NOW READY.

JAMES CYPHER,
Exotic Nurseries, CHELTENHAM.

Price 2/6; Post Free 2/7½.

THE PINE APPLE MANUAL

By Contributors to the "Journal of Horticulture."

ILLUSTRATED WITH ENGRAVINGS.

Being a Guide to the Successful Cultivation of that Fruit,
and to the Construction and Management of the Pinery.

Office: 12, MITRE COURT CHAMBERS, FLEET STREET, E.C.

For Present Planting.

ROSES

ON THEIR OWN ROOTS.

Strong Plants in 5 inch Pots of leading Hybrid Perpetual, Hybrid Tea, Tea, and other Classes,
10/6 to 18/- per dozen, 75/- to £6 per 100.

DESCRIPTIVE CATALOGUE FREE ON APPLICATION.

N.B.—Many of the choicer varieties can now be supplied which are not available on their own roots from the open ground in the autumn and winter.

WM. PAUL & SON
WALTHAM CROSS, HERTS.

No. 1207.—VOL. XLVII., THIRD SERIES.

CLIBRANS BULB CATALOGUE

Contains a choice and select List of all the best varieties of Bulbs for indoor and outdoor growth; descriptive and priced.

GRATIS AND POST FREE.

CLIBRANS STRAWBERRY LIST

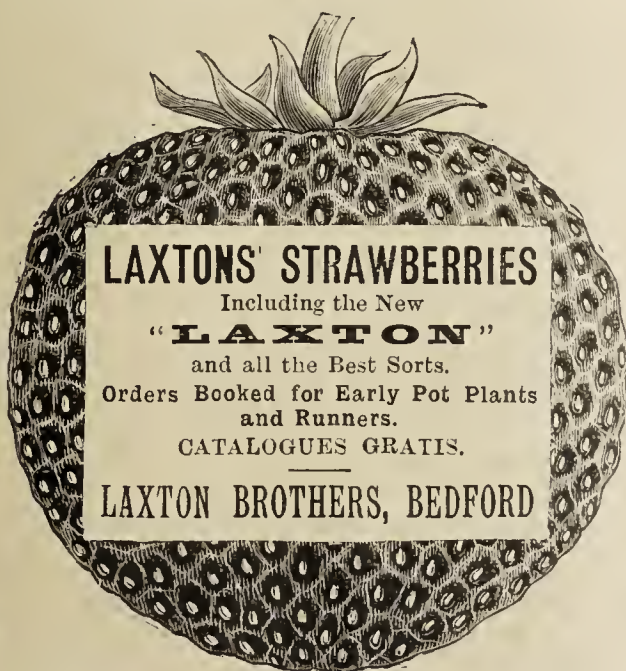
The newest and best novelties and all choice and standard varieties are described and priced; cultural hints, &c.

GRATIS AND POST FREE.

ALTRINCHAM & MANCHESTER

LONDON FERN NURSERIES.

LOUGHBORO' JUNCTION, LONDON, S.W.—Stove and Greenhouse Ferns, large and small, in var., Aralias, Grevilleas, Cyperus, Ficus, Ericas, Palms, Dracenas, Aspidistras, Roses, Azaleas, Carnations, Crotons, Camellias; Chrysanthemums, Cyclamen, Bouvardias, Asparagus, Araucarias, Solanums, Aspidistras, Cinerarias, Genistas, Marguerites, Geraniums, Primulas, Orange Trees, &c. Trade, send for Wholesale List. Special Retail Catalogue, free.—J. E. SMITH.



THE GARDEN MANUAL: for the Cultivation and Operations required for the Kitchen Garden, Fruit Garden, Flower Garden, and Florists' Flowers. Illustrated with Engravings and Plans. By the Editors and Contributors of the *Journal of Horticulture*. REVISED EDITION now ready. Fcap. 8vo, cloth, price 1/6; post free, 1/9. *44,000 of previous editions already sold.—JOURNAL OF HORTICULTURE Office, 12, Mitre Court Chambers, Fleet Street, E.C.

PURE WOOD CHARCOAL, Specially Prepared for Horticultural use. Extract from the *Journal of Horticulture*: "Charcoal is invaluable as a manurial agent; each little piece is a pantry full of the good things of this life. There is no cultivated plant which is not benefited by having Charcoal applied to the soil in which it is rooted." Apply for Pamphlet and prices to the Manufacturers—HIRST, BROOKE & HIRST, Ltd., Leeds.



Journal of Horticulture.

THURSDAY, AUGUST 13, 1903.

Window Gardening.

WINDOW gardening as practised by the cottager is certainly conducive to real enjoyment. There is something pleasant and cheering in the sight that speaks of a thoughtful appreciation of objects of interest, and shows that amid the cares of daily life some little attention can be given to pets that vary the occupation of the day, as well as afford some little gratification as the result of successful manipulation. But when we come to think of the inhabitants of the close courts and narrow streets of crowded cities trying to emulate the cottager in this respect—and not only trying, but actually succeeding, in growing plants and flowers about their squalid homes, where every circumstance is as little favourable to the design as can well be imagined, it certainly looks as if the love of flowers were inherent in human nature, and too strong to be resisted under any circumstances. From what I have actually seen I know that window gardening is carried on to a large extent in some of the most densely populated parts of London, but should never have thought that there were exhibition plants grown in such places; but there is no disputing what has been done, and my only object now is to offer a few suggestions which may or may not be of use.

As a gardener, I have occasionally had to deal with men who were sent from various workshops of London—men that usually inhabit the crowded dwellings of the metropolis. Most of them, when thus sent into the country to build new houses or do up old ones, leave wives and families, mothers and sisters, in their homes in the crowded thoroughfares, to whom they return once a week; and if they can but get a small plant or two, a few cuttings, or a bunch of flowers to take with them, they are delighted beyond measure. I have

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

frequently by this means diffused as much pleasure among a number of workmen as though I had done them the greatest service in the world. There are those who would demur at thus giving away plants when there are many who have to get their living by selling them. But in reality it is a help to the trade; for by this means the foundation is laid for a love of flowers. Those who have had them once will not like to be without them, and will purchase many a plant in order to keep up the supply, especially when they have gained a slight knowledge of the way in which they should be managed. The gift of a piece of a Cactus, a few rooted pieces of Chrysanthemums, or a few offsets of any herbaceous plants are carried home with delight. And where is the garden where such would be deemed any loss? Thousands of slips and cuttings are annually thrown away; many gardeners prefer doing so to giving them away, even to the poor cottager, on the excuse that it is hurtful to trade. The sooner they are disabused of such reasoning the better, since the contrary is actually the case.

But what I have chiefly to suggest is, that some attention be paid to the kind of plants most suitable and best adapted to be grown in close courts and smoky thoroughfares. It is evident that all plants will not do alike, nor is it possible that plants will ever be grown in such localities as are shown in all the prime of perfect beauty at first-class flower shows. Specimen Heaths, Azaleas, and New Holland plants can never be grown on window ledges; and those plants that can be must necessarily be limited in number, for the reason that those who have the management of them are not experienced growers. In the hands of experienced cultivators very many plants are capable of being brought to a certain stage of perfection by window culture, but the chances are reduced in proportion to the unfavourable condition of the locality. Where it may be easy work in the country, it becomes difficult in the midst of dust, smoke, and draught, even in practised hands.

What, then, must be the difficulty with those who know little or nothing about the matter? I have often been shown a sooty-looking plant and been asked the cause of its present condition, why the leaves fall off prematurely, why it does not flower, and so on. In ten cases out of twelve the plant happened to be a scarlet Pelargonium, a plant little adapted to grow in a dusty place, the downy surface of the leaf being favourable to the lodgment of dust. A glance at the plant showed that the pores of the leaves were stopped and could not perform their functions, that the operation of potting was by no means properly understood, and that it was tortured to the extreme by being made to stand in water, and being subjected to a daily dose of the same whether it liked it or not. It is scarcely to be expected that such florists are going to exhibit good specimens of Pelargoniums, or compete with country growers. But even with such a beginning, knowledge may increase with experience, and practice may point out the best plants to grow, and the best method of growing them. It is too much to say that perfection has been attained when Ivy has been grown in an old box and trained over the window, or that Mustard and Cress has been grown in an old colander.

The Chrysanthemum is not of the most smooth-leaved plants, yet its adaptability to town culture is well known and fully established; and even the Pelargonium under fair treatment may present a creditable appearance. The Fuchsia and the Genista are rather smooth-leaved, and are very good town plants. The Pentstemon is sure to do well; and I think a great deal might be said for plants of ornamental foliage, especially the smooth-leaved ones, as *Farfugium grande*. But, again, I think the chief dependence ought to be placed on herbaceous plants of close habit, which make very neat pot plants. How I should like to see some town grower giving all his spare time and attention to a collection of Saxifrages, than which nothing can be prettier or neater, or even better adapted for the purpose. And why not the commonest among them—the London Pride (*Saxifraga umbrosa*), a plant well adapted to spread over pots and boxes, hanging down and making a verdurous appearance on a window-sill? The Sedums and Sempervivums are both excellent subjects for town culture—that is, if a proper selection of them be made—the common Stonecrop and the common Houseleek, a sample of each often grows luxuriantly on the housetop and the window-sill. *Campanula pumila*, *Alyssums*, *Arabis*, *Vincas*, and *Auriculas* might be added to the list. Indeed, I have known the latter grown, if not to perfection, at least

very creditably at a garret window; and what has been done before may be done again, for the person who grew them knew very little of plants or plant-cultivation generally.

The advantages of having plants with hard or smooth leaves is that they are kept clean with very little trouble, as a sponging now and then will accomplish it, and does no injury; and that of ordinary herbaceous plants, that they are less subject to be infested with aphides or other pests, and when grown in the midst of town smoke they are not likely to be eaten by caterpillars or slugs, as such pests are not likely to travel so far out of their way in quest of food. There are still other plants that possess a wonderful property of resisting all the attacks of insects and other counteracting influences. I have known a plant of *Ficus elastica* which for many years kept its place in a window in the heart of London, and it always looked fresh and healthy.

I have another suggestion which, within certain limits, may be worth attention. In towns, where the light is obstructed by buildings as well as by a perpetual cloud of smoke, it is scarcely possible that plants which in their natural habitat enjoy the full light of the sun can be expected to do well. But happily there are plants that naturally seek the shade of woods. Among these we find the *Oxalis*, the *Wood Anemone*, the *Lily of the Valley*, the *Woodruff*, the *Periwinkle*; there are besides that neat and still pretty trailing, but rather neglected plant, the common *Moneywort* (*Lysimachia nummularia*), and many more plants that are in reality not the less attractive on account of being found in a wild state in this country. I have an idea that such are likely to be more attractive among the poorer townspeople than exotic plants, on account of their association with the scenes of their holiday rambles; at any rate, I have known a common *Primrose* prized and cherished with as much or even more regard than the well-to-do has for his choice collection of exotics.—T. C.

Codiaeums (Crotons).

PROPAGATION.—The time will soon be at hand to commence propagating these popular and useful plants. Some gardeners prefer to do this in the early spring, but where serviceable young plants are required in April, May, and June it is advisable to propagate in September. Procure well-coloured tops, and insert them singly in thumb-pots filled with a mixture of loam, sand, and plenty of leaf soil; they root very readily in the latter.

Place the pots in a propagating frame, wherein a good bottom heat is maintained. Syringe them lightly every morning, and keep the frame closed during the day; at night remove the light. If bottom heat by means of hot water piping is not available, fill the frame half full with stable manure or leaves, place a layer of sawdust or cocoa-nut fibre on top, and plunge the pots into it.

When the cuttings are rooted, take them out of the frame and stand them in a shady position in the stove for a couple of days before potting them. A shift into large 60 or 54 size pot will be large enough to carry them through the winter. For potting use two parts fibry loam, one of leaf soil, and one of charcoal and broken crocks. In February shift them on into 48 and 32 size pots. Plants of a good size, and suitable for house and table decoration, can be grown in 48's.

SUMMER TREATMENT.—The plants should at all times be placed in such a position in the house that they will receive plenty of light and sunshine; the nearer the glass they can be kept the better. Use the syringe among them freely two or three times a day, according to the weather. Besides promoting a free growth this will keep insect pests down. To ensure freedom from the latter it is an excellent plan to syringe the plants once a week with some insecticide; 2oz of softsoap, and the same quantity of paraffin oil to every gallon of water, takes some beating for keeping Crotons clean if used properly. When the pots are full of roots stimulants may be given to them with beneficial effect. Diluted cowshed drainings is the very thing.

Endeavour to obtain as much growth as possible in the plants during the spring and early summer, and then direct attention to the colouring of them. The system I adopt to obtain a good colour is, when sufficient growth is made, to admit plenty of air, especially on calm days; at the same time maintain a good heat in the pipes, and keep the atmosphere of the house somewhat drier than usual. Further, leave a crack of air on all night when the outside temperature is above 58deg. This treatment will bring out all the bright and various colours—which are so much admired in a well grown batch of Crotons—to perfection.—GEO. RIMMER, Waddesdon Gardens, Aylesbury.



Cattleya Rex.

This South American species (Andes of Peru) is of the labiata section, flowering in summer, and has creamy-white to yellow sepals and petals. The lip is crimson veined with yellow, shaded white and yellow, with a white fringe. It requires a warm house to succeed with it.

The Week's Cultural Notes.

The Angulcas are now finishing their growth, and it is important that they are encouraged to do this well, strong, healthy pseudo-bulbs being always followed by fine flowers, provided the former are properly developed. Where recently repotted the roots will by now have sufficiently penetrated the new compost to take a full supply of water without injury, and this must be allowed. After the bulbs are fully grown the plants will be better for a week or two in the open air if the garden is sheltered. But they must not be exposed to the full sun at first, the tissue of the plant requiring to be hardened a little by slight exposure in a frame.

The shade of a fruit tree or shrub is sufficient protection if a frame is not at command, and the water supply must at first be quite as liberal as when under glass. Afterwards much less will suffice, until in winter only enough to keep the bulbs plump need be given. There are now many plants coming from the flowering house to be returned to the growing quarters, and these require a little more care than usual, not allowing the sun to shine fully upon them at first, and maintaining a moist atmosphere about them; a kind of convalescent treatment, in fact.

The deciduous *Calanthes* have almost finished growing, and will require plenty of room. The removal of some of the earlier plants of *Dendrobium* from the warm house will probably allow of the *Calanthes* being spread out a little, thus allowing the light to reach all parts of the foliage and the embryo flower spikes, to their benefit. Keep the water supply going fully to the roots until the foliage begins to turn colour, after which it is useless, as at this time the roots commence to decay also. This does not apply to *C. oculata gigantea* and similar late flowering sorts.

While allowing an increased amount of sunlight to most of the intermediate and warm house species, carefully screen those of tender foliage, instances that occur to mind being the *Paphinias* and *Promenæas*. It is just possible that some of the former may require attention to the compost, their fleshy roots simply refusing to enter sour or waterlogged soil. Green sphagnum tips and a sprinkling of loam fibre is very favourite compost for these sensitively rooted species.—H. R. R.

A Beautiful Orchid in Aberdeen.

At present there is being displayed in the shop window of Messrs. Cardno and Darling, florists, Guild Street, a rare and beautiful Orchid, grown by Mr. Robert Walker, superintendent

of the Victoria and Westburn Parks, in the Victoria Park hot-house. The plant, which is of the genus *Stanhoepa* (a large genus of handsome flowered epiphytes, named in honour of Earl Stanhope), and of the species *tigrina*, has two large pendant flowers, and it may be mentioned that there was a third flower, which, however, did not thrive as the others did. The following description of the plant is given in "Cassell's Popular Gardening": "*S. Tigrina*.—This species produces the largest flowers in the whole genus, often measuring 8 in across. Sepals and petals very thick and waxy, the ground colour a rich yellow, irregularly blotched and striped with rich brown. Lip tawny yellow, dotted with reddish-brown. It yields a very strong odour, somewhat between vanilla and melon, and very aromatic. Summer months, Mexico." The specimen on exhibition is an excellent one, very creditable to the skill of Mr. Walker and his staff as floriculturists, even with their limited hothouse accommodation.

Earthing Celery.

This is an operation that requires considerable care if the gardener desires to secure finely blanched clean sticks, or heads, of good quality; but it is often done in a slovenly and careless manner, which cannot possibly give the best results. The time is now on us for attending to this most important operation. Some growers make a practice of earthing all at one time; but where the extra time and labour in giving more attention to it can be spared, the results are very much more satisfactory. It is far better to accomplish it in three different operations, with



Cattleya Rex.

intervals of ten days or so, before the final earthing up is complete. Some time during August the earliest Celery should be ready for the first earthing, which should only be slight. The greatest care is required to prevent any soil from dropping between the leaves into the centre of the plant. All suckers should be removed and the loose soil gently but firmly pressed round with one hand. Where possible it is much better to mix some sharp sand with the soil lying close against the plant, which acts as a preventive against slugs. On completion the tips of the leaves only should show above the top of the trench, the sides of which should be firmly made into a sharp slope. The old method of binding round the plants with paper, straw, large leaves, and other materials, which at best only harbour slugs and other pests having a taste for this esculent vegetable.



Origin of Our Garden Fruits.

Like so much that is grown in our everyday gardens, be it fruit, flower, or vegetable, we are indebted for their origin in no small degree to some foreign clime which in their pristine form has given them birth. A few notes on the subject of the native habitat of our chief garden productions in the first-named class may therefore be of interest in the present season, now approaching its zenith and flush with a summer's growths. Alas! that the sum total of "small fruits" of this year of grace should be a singularly dismal tale of woe.

To begin, then, with that earliest and most useful little pioneer, the homely Gooseberry, welcome all the way along from early May to when the summer is dying hard (if netted latterly from the predatory blackbird), both for its excellence alike in the green state as in the condition of its many-coloured ripe maturity. A rather wide sphere seems to represent its proper home, ranging from many parts of Europe to Northern Asia. Probably, however, it is not a native of Britain, having apparently only been in cultivation here some two or three centuries. Its special culture has been chiefly taken up in one of our northern counties, viz., Lancashire, where several varieties have attained to such a height of perfection, or shall we say size, that exhibition specimens have been found to scale up to two ounces, a surprising weight indeed for so small a fruit. One gardener of the writer's acquaintance described with pride how by good culture the Gooseberries under his charge had become so gigantic that his mistress complained that she could not get them into her mouth, whereupon he obtained from a nurseryman a specially small kind which ever after went by the name of Mrs. —'s Gooseberry! The seed of the berry of this little shrub takes root in many an out-of-the-way and unexpected corner. Besides frequently springing up in woods well away from the abodes of men, it will confront one in the poorest and driest soil, right under some shrub or tree, where but a modicum of direct sunlight can reach, yet often, too, making a brave show of small fruits thereon.

As regards its sister product, the clustering Currant, perhaps this fruit derives its name from Corinth, where the small Grape for which it is famous is so largely grown. It is a denizen of the woods in Southern Europe, and may be said to be a naturalised native here, while its black confrère inhabits moist woods and banks of streams in Europe and Northern Asia; which latter haunt, too, the Red Currant seems fond of, as witness several seedling bushes right in the bank, and almost touching the water of my own stream here in Warwickshire, and bearing year after year quite respectably sized fruit, totally uncultivated and uncared for.

Next in order I think the Strawberry demands our attention, and I believe I am not incorrect in stating that many of our best kinds have their origin as regards pedigree from Chilian lineage. It flourishes, however, in very diverse climates, being a lover both of Alpine altitudes, where it seems to assimilate to itself somewhat the flavour of its Pine surroundings, and of lowland woods. Still, in its wild state its particular penchant is on sloping ground at a good height, and on very dry, well-drained soil, but much shaded. Judging by our British wild Strawberry, indeed, the cultivated kind seems to have not much in common with the former, requiring for successful growth a good stiff soil such as clay to root in, and plentiful supplies of liquid.

The Raspberry, besides being common in Britain, is found wild in its various kinds pretty well over the whole of Europe, as well as Northern Asia and other parts, delighting even more, perhaps, than the Gooseberry in its unreclaimed state in dense shaded copses.

And now we come to the Plum, that fruit which many regard with very mixed feelings. In years of plenty I fear the poor grower makes but a scanty thing out of the bounty. Time and again one hears the same dismal tale of the fruit

not paying to gather, and the waste which consequently takes place is deplorable; occasionally, indeed, the fruit being allowed to fall and rot on the ground. In a manufacturing town not a hundred miles from the Midland metropolis I came across the case of an aspiring cottager from a neighbouring village, who, like the costermonger in comic rhyme, "wheeled his wheelbarrow through streets broad and narrow," full of luscious Victorias, in his case some three miles to market, only to find a fine glut on; and, having no use for them at home, in despair cum a little temper, perhaps, he emptied his load out on the roadway, for which he was duly fined, poor fellow, for causing an obstruction! I wot the insult added to the injury sent him home a wiser though a sadder man. Beguiled from my proper theme by this digression, I may say that the Plum seems indigenous over Europe generally and central Asia, most, if not all species being derived from the Sloe (*Prunus domestica*), and being the wild Plum found in hedgerows and thickets over England and in parts of Scotland, while in addition there are the other varieties of wild Plum, such as the Damson, Bullace, Mussel, and Wine-sour.

A word here regarding the Cherry, that fruit which the birds of the air seem to consider as their own particular prerogative; though fortunately the kind termed Morello is not quite so much to their liking. Its birthplace has a very wide realm. In its wild condition, in fact, it is found in several continents and in many countries, the glorious wealth of blossom making it more than conspicuous whether in the hedgerows and woods of our own islands and continental lands, or in the Himalayas and temperate parts of Asia; while those who have seen the gorgeous display of bloom in the semi-cultivated parks of merry Japan, where the Cherry is so especially prized and grown, not indeed for the sake of the fruit, but for its pure white blossom, beloved by its inhabitants, and employed for decorative, social, and religious purposes, will not readily forget the feathery, cloudlike effect produced in such spots as the Ueno park in Tokio, and other special districts.

One other summer fruit must be touched upon—videlicet, the Apricot. A native of Armenia, this grateful delicacy has been cultivated in England since the sixteenth century. Very large numbers are grown and dried for home and export trade at Bokhara, while travellers in the near Orient will readily be familiar with what is partly a staple food, the mishmish of Arabia and other similar countries. That accomplished Eastern scholar Canon Tristram, if I mistake not, holds that the Apple of Scripture was de facto the Apricot, which version, other experts concurring, may probably be accepted as correct.

We come now to our later or autumnal products, and first of all the Peach. As its name somewhat implies, Persia is its godfather, perhaps, though for its real original home I trow we must go much further afield—indeed, to mystic Cathay, for presumably it came in the first instance from China, and, like the Nectarine, whose stone kernels are similar, it belongs to the genus *Rosaceæ*. As is well known, nowadays it is very largely grown in several of the Southern States of North America and in California. Being of rather a shy nature, and requiring a quantum of its natural element, the sun, it can scarcely be looked upon as a successful hardy fruit in the north of our own country, or even in the Midlands, as a rule; but in the South and West of England and Ireland, against a wall with a southern aspect, and a little protection by a top coping and herring nets to guard from frost, it succeeds remarkably well.

Next comes the Pear. This is found in many parts of Europe and temperate regions of Asia. It may still be seen in Britain in its wild state, possessing a very thorny and harsh fruit. It, too, is largely grown in Georgia and other Southern United States.

The invaluable Apple was probably introduced into Britain by those pioneers of empire-making and civilisation, the Romans, who cultivated it extensively, though it is from the Crab tree native of Britain that most of our modern Apples are produced. It would seem that the seeds of this fruit are as capricious as many other progenitors, whether of the animal or vegetable kingdom; for I have in my orchard a twelve-year-old stripling sprung from a Wyken Pippin seed (the Wyken is a local favourite in Warwickshire, and named from the adjoining parish, where apparently it was originally raised). Now, as all lovers of this little favourite know, the Wyken Pippin is a very small and firm bright yellow Apple, nearly round, with a flattish head, whereas the produce from its seedling is an enormous

brilliant red fruit, soft fleshed, and oval in form. This seedling appears to me quite good enough to introduce into commerce. For the nonce, however, its presence and fame are confined to the spot it emerged from, and its name is that of its sponsor in the flesh, the gardener who sowed it, "Atkins' Seedling."—J. A. CARNEGIE-CHEALES.

Figs under Glass.

EARLY FORCED TREES IN POTS.—Immediately the second crop of fruit is gathered examine the trees for red spider and scale, as keeping the soil and atmosphere somewhat drier encourages the pests. They are almost certain infesters of Fig trees in heated structures, and get ahead during the ripening of the fruit. When that is cleared off the trees, recourse must be had to cleaning. If, therefore, these pests have made undesirable progress, it will be advisable to syringe the trees with a paraffin oil solution, one part softsoap dissolved in eight parts boiling soft water, and to three gallons of this solution add a wineglassful of paraffin oil, and churn with a syringe until well amalgamated; then use at a temperature of 135deg, wetting every part of the tree, the under as well as upper side of the leaves, and all the wood. Paraffin oil emulsion diluted with ten parts hot water may be used for the purpose. To prevent the solution soaking into the soil a little dry moss may be tied round the stem, and then a sort of pyramid of the same placed about the plant and extending over the rim of the pot. In severe infection repeat this in the course of three or four days, afterwards syringing thoroughly with tepid water. The trees will only need water to prevent the foliage becoming limp, ventilating to the fullest extent day and night, but protect the trees from heavy rains.

EARLY FORCED PLANTED OUT TREES.—As the second crop is ripening a circulation of air constantly is imperative, more, of course, by day than at night. If dull weather prevail a gentle heat in the hot-water pipes is necessary to secure well-ripened fruit and prevent spot, a fungus disease attacking the Figs at the eye. Watering at the roots should be diminished and syringing discontinued; but a moderate air moisture may be maintained for the benefit of the foliage. If red spider is present heat the hot-water pipes to from 150deg to 200deg, and paint them with flowers of sulphur formed into a cream with skim milk, keeping the house closed for the night, but allowing the pipes to cool after about an hour. As soon as the fruits are all gathered the trees may have a good washing with the syringe or garden engine to clear the foliage of dust and red spider, otherwise a free circulation of warm, rather dry, air should be maintained in the house until the foliage commences falling naturally, which must not be accelerated by allowing the soil to become dust dry at the roots.

UNHEATED HOUSES.—The fruit is advanced in swelling, and ripening commencing. Admit air early, increasing it with the sun heat, maintaining through the day a temperature of 80deg to 85deg, with free ventilation, closing early so as to run up to 90deg or 95deg, even 100deg; and when the sun's power is declining a little air may be admitted at the top of the house, so as to allow the pent up moisture to escape, the temperature gradually cooling down. Water or liquid manure will be necessary for keeping the soil properly moist.—GROWER.

"White" Blackberry.

A "white" Blackberry is reported from Santa Rosa, California. It has been grown by a well-known breeder of new fruits, Mr. Luther Burbank, and is a cross from the Lawton Blackberry. It is called the Iceberg, and is quite hardy as well as prolific.

The "Daffodil King" on Tour.—No. 8.

(Continued from page 78.)

MELBOURNE.

Melbourne has one of the finest botanical gardens in the world, and Mr. W. R. Guilfoyle, the superintendent, is an artist who has brought his abilities to bear in the laying out and planting of the grounds. These contain a large, ugly reservoir, which rises up to a peak like that of a small crater. He has treated this as it stands, by covering the surface with weather-worn stones to represent the flow of lava, and planted amongst these stones metallic-grey Agaves and similar plants. Melbourne has made a new entrance to their Botanic Gardens, and, in doing so, a large slice had to be taken from the elevated ground on which the Government house is built, and from the railway this looked from its smooth surface as if an immense slice had been cut from a gigantic cheese; the bad effect is being shrouded off by the planting of suitable shrubs and the building of an elegant temple. There is a good botanical collection of plants maintained, and

Mr. Barr says he knows of no finer public resort in any part of the world he has travelled in. The grass is in large expanses, and always kept in perfect trim. The garden is lacking in glass structures, but there is one conservatory with a goodly assortment of well-attended plants.

Mr. Guilfoyle suffers from the way in which his labour supply is provided. Instead of being allowed to have a staff of his own choosing, he has men supplied to him often from the public office—men who are simply messengers, and worthless as garden labourers, and frequently after he has had the trouble of training this raw material, back they go to indoor service. This, of course, handicaps him very much.

There are some parks in Melbourne all of considerable interest, while street planting is becoming a very important feature. Melbourne is far and away the finest laid out city in the southern hemisphere, and the citizens are determined, so far as that is practicable, to make it the most attractive city. Great progress in this respect was made even during Mr. Barr's stay in Australia.

The old horticultural gardens of Burnley are close to Melbourne, and are at the present time in the hands of a very efficient superintendent, a man likely to make his mark in Victorian fruit culture. This is Mr. Luffmann; Mr. Barr attended a number of his lectures to the students, and speaks in the highest praise of his ability to command the keenest attention of his audience.

The soil of Victoria is admirably adapted for agriculture, but the original gifts of locations have now, Mr. Barr thought, largely fallen into the hands of a few large holders. The irrigation scheme for capturing the water of the Goulburn river is a magnificent piece of work, and done quite irrespective of cost. Unfortunately, all the farmers will not use the water, with the result that the promoters cannot meet the interest on the outlay.

The Government of Australia have not yet settled on a Capital. Mr. Luffmann, their superintendent of horticulture, had made some useful suggestions, and was one of those who were chosen to select a suitable site.

Adelaide is unquestionably the most beautiful town in Australia. It is not very large, but it is so splendidly laid out, and the situation was well chosen in the midst of hills. It is seldom that the nights are warm in Adelaide, as there are cool breezes from the sea. The town has its botanic garden, containing some fine specimen trees, glass houses, and ruled by a clever director. A few miles out a large tract of land has been laid out as a fruit farm, and this also comes under the botanic garden director's care. If the people of Adelaide do not possess the bustle of those of Sydney and Melbourne, they are yet very hospitable, and Mr. Barr declared that there is more genuine horticulture in and around this city than in any other in the Island Continent.

Freemantle, in Western Australia, is a very primitive place, but Perth, where the Government House is, furnishes a really beautiful city, being admirably situated, and having a fine natural park, carriage drives are laid throughout. Here the "Kangaroo Paw" may be seen in its native excellence, and some of its varieties are of extraordinary beauty. This natural park forms a plateau—overlooking a wide expanse of water, "without exception it is the prettiest bit of landscape I almost ever saw"; and here the interviewer smiled, as the reader now smiles, and as Mr. Barr will smile, when he notices "a contradiction in terms" which his Scottish bump of caution has led him into. The slopes of the park are terraced and are nicely planted.

Here, at Perth, on the Swan river, the black swan can be seen in its native habitat, and large flocks sail up and down, it being a protected bird. The Swan river is a noble sheet of water, but is at present only deep enough for small vessels to navigate, and on one of these Mr. Barr sailed from Freemantle to Perth. Some large P. and O. steamers go as far up as Freemantle, but many of the Australian steamers take in or land passengers at Albany, on King George's Sound, in the south-west of the colony. The governor's garden is of considerable size, but not greatly attractive. Taken all in all, Mr. Barr classes Perth third among Australian cities of note for beauty.

Albany was a prosperous place till Freemantle became a port. It possesses a fine bay, in which ships of the largest size can safely anchor. Close to Albany there can be seen the *Boronia megastigma* in its wild state growing in marshy ground.

AUSTRALIAN NURSERIES.

Starting with Brisbane, Mr. Barr observed that this city is practically without a garden nursery. Sydney and Freemantle had had nurseries, but are almost extinct. Melbourne, however, is fairly well supplied, and Mr. Cheisman's is decidedly the finest. Adelaide possesses a nursery which is managed by an old English gardener who seemed to appreciate specimen plants rather than money, and our traveller considered this man's nursery unique amongst those of Australia. If Perth should ever take to growing Hyacinths and Tulips it should become the Holland of the Southern Hemisphere, the conditions being the most favourable of any place found during the Daffodil King's travels.



Diseased Tomatoes.

Many thanks for your very kind reply to my query re Tomatoes, which I esteem a very great favour, and I beg you to accept my best thanks. I may say we have not been able to stamp out the disease yet, but I have little doubt it was introduced by buying a packet of seed from a nurseryman, as it appeared in four distinct places from two different sowings of their seeds before it appeared on any other sorts, which I think you will agree accords with your very full account.—A. W. R.

The Celtic Element in Plant Nomenclature.

Some plant names, though in appearance Latin, are, in fact, Celtic. Linum, for instance, is derived from "lin," a thread, and Galium from "gal," white, and not from the Greek gala, meaning milk, as one would expect. "Gal" is in allusion to the prevailing colour of the flowers in the genus. Borage comes from "borr," or "borrach," meaning pride, probably because of its somewhat beautiful flowers. Beta, Beet, has its origin in the word "beadh," or "beathe," food or life, both of which in Celtic imply the same thing. Sium, a well known wild plant, takes its name from "siw," water, as also does Apium (Celery), from "apon," water. Sison, a wild plant of the same order, comes from "sizum," a brook. Allium, the generic name for the Onion tribe, is derived from "all," acrid. Alisma, the beautiful water plant, comes from "alis," water; and Pyrus, from "peren," a Pear.

Rosa does not look as if it were in the least of Celtic origin, yet it is said to be derived from "rhos" (?). Rubus comes from the Celtic verb "reub," to tear, and is very appropriate, at all events. Papaver comes from "papa," the paps, no doubt in allusion to the milky fluid which the capsule exudes. Betonica, the Betony, from "ben," good, and "ton," head, no doubt alluding to its lauded medical virtues.

Brassica, the Cabbage patronymic, comes from "Bresic," a Cabbage; Genista from "gen," a bush; and Ervum, the Tare, from "erw," a ploughed field. Alnus, the Alder, comes from two words, "al," near, and "lan," a river bank.

Betula, the Birch, appears to have the same derivation as Beta, namely, "beadh," or "beathe," and the latter is still the Gaelic name.

Pinus, the Pine, takes its name from "pen," or "ben," a mountain. Salix, the Willow, comes from "seilach," probably derived from "siw" on account of its water loving disposition.

The reason for this blending of Celtism with Latin appears to lie in the fact that Britain, at the Roman Conquest, was inhabited with a race or races whose language was some form of Celtic, probably Cymric. When a race is subdued it seldom happens that their place, or other outstanding names, suffer the fate of their country. These almost always are retained by the conquerors, but more or less modified in form, so as to become adapted to the idiom of the new language. I think this is exemplified in our own history as conquerors all over the world. We find the retention of the old names convenient, and evidently the practical Roman was also alive to this same thing twenty centuries ago.

This form of gilding one language by another is totally different from the complaint set forth in the *Journal of Horticulture* (page 77) by Mr. Fletcher. His objection would seem to be more against the introduction of Latinised personal names as descriptive terms. It certainly is not easy to see how a form of nomenclature could be maintained, with any pretension to accuracy, without adopting something after the manner in question. The first and chief aim of botanists is to make the descriptive name as nearly perfect as possible, and that in the language of the generic name. I think their efforts in this direction are worthy of the greatest praise, for, in consideration of the multiplicity of new names arising from cross-breeding and hybrids, their task is by no means an easy one.

The principle upon which they carry out this task is both simple and intelligent, and at once conveys to the gardener a description or history of the plant so named. It does not follow that the suffix "um," or even "us," is the only one used in such cases. As is well known to gardeners, this depends upon the gender of the plant, and on any other characteristic which it is desirable should be qualified. Our plant nomenclature, though far from perfection, is, I think, one of the finest examples of skill and learning that any science offers.—D. C.

Co-operation in Horticultural Competitions.

The success of the movement which owes its inception to the enterprise and resourcefulness of Lady Algernon Gordon Lennox has shown clearly what can be done by combination among cottagers and amateurs. In the large tent in which the exhibits were staged at Broughton Castle on August 3 there were unmistakeable evidences of great cultural skill and painstaking effort in staging. Not only was the show a success from a cultural point of view, but judging from the vast crowds who flocked to see it, it is evident that what is generally designated as a "flower show" (even when consisting principally of vegetables) will still attract the multitude, provided those interested are distributed over a wide area, and also that such quaint and delightful places as Broughton Castle and its surroundings can be secured for holding the exhibition. Quiet Banbury became a perfect Mecca for one day only, and the roads between it and the "moated castle" resounded with the unceasing rumble of rolling wheels and the merry voices of city toilers and stalwart countrymen on pleasure bent.

Similar competitions will undoubtedly be arranged in other counties in the future; a new era in horticultural shows may, therefore, be said to have begun. We live in an age of combines, and it seems to me that this principle of co-operation may with advantage be developed in regard to shows at which professional gardeners compete. Why should we not have a great show every year at which the collective produce of each county in Britain could be staged in competition? The details of such a competition would require careful consideration, but the following suggestions may perhaps provide a crude idea from which a workable scheme could be evolved.

Each county intending to compete should form a union for that purpose. Trade growers should not be allowed to compete. The show should be held in a different county each year. Each competing county should guarantee an equal portion of the working expenses. The competition should be for a collection of cut flowers, fruits, and vegetables. The prizes ought necessarily to be large and numerous, as a good system of organisation would be imperative in order to secure the best produce in each county. In addition to money prizes a handsome challenge trophy should be provided, which would show in a tangible way the horticultural superiority of the county holding it.

The thought which at this stage will naturally rise to the mind of readers is, Could such a competition be made a financial success? I for one think it could, because the horticulturists of every county would become keenly interested in the success of their own union, and the competitive spirit thus engendered should lead to progress by imbuing all true cultivators with the desire to grow something well enough to form a part of the "county collection." I trust the above remarks will have the effect of eliciting the opinions of various readers of the *Journal of Horticulture*, and of securing the co-operation of prominent horticulturists in many parts of the country.—WANDERER.

The Carrot Crop.

Being but a "mere gardener," and not one of those appointed to instruct an enlightened peasantry in the art of growing Potatoes and Cabbages, it is with some slight trepidation that I venture to pen a few remarks in reference to the dismal tales of the failure of Carrot crops so recently published from *Journal* correspondents.

I am firmly convinced that culture has a great deal to do with the troubles recorded. One has only to notice the difference in the crop raised from a given piece of land by different men to feel sure of the truth of this; for where one fails ignominiously the other will as signally succeed. Give one of our first-rate exhibitors of vegetables the poorest of land in the worst possible condition on which to produce these roots, and though he may not be successful the first season, he will by his methods in the succeeding year, in nine cases out of ten, draw Carrots fit for the show table.

As is well known, deep soil culture is a great factor in the ultimate gain or loss in respect to this crop. Different times for sowing the seed have, as I well can prove, an important bearing on the subject. In some localities early seeding is advisable; in others a later period must be chosen. Above all, the plants should be kept growing without a check from the commencement to the end of their career. Drought, which is such a certain precursor of insect attacks, must, as far as possible, be avoided, and here we have an unanswerable argument in favour of deep cultivation for this vegetable.

The prevention of injury from aphids is comparatively an easy matter; light dressings of soot applied over the plants in showery weather will not only be a great aid against these attacks, but also in great measure ward off the winged insects which are the first cause of the maggot trouble. It is, however, hardly necessary to enlarge on the various remedies and measures of precaution that growers have found useful, for they

have all, or most of them, been enumerated in these pages at various times. The chief essential, after all, is a deep and generous soil, thoroughly worked and sufficiently charged with nutrient matter without being crammed to sourness with humus. —TREWEN.

I notice that the Carrot disease is, as is its wont, the cause of some anxiety among a few of your correspondents. Few gardens do really turn out a crop of presentable Carrots. This is a pity, because a more useful root for the kitchen is not in the category of our culinary vegetables. The ravages of the dread Psila have made many gardeners abandon Carrot growing altogether, with the exception of a few early forced ones. Since my first contact with horticulture, the Carrot problem shared a part of my attention, and as far back as twenty years ago I put some of my "dreams" into practical effect, with the result that I gave expression to my success in a well-known gardening paper, then edited by Shirley Hibberd. This being my first venture, no one

dung and leaf mould was laid down, and the clay from the bottom placed above it on the surface. This process was carried on till the whole plot was literally turned upside down. Of course, the soil was about 2½ft above the level of the walks. Every person was good enough to tell me that I "did" for that plot. My employer thought differently, and encouragingly assured me that if Carrots can be grown something such as I was essaying must be done. The Carrots *did* grow, and continue to do so.

I confess that the appearance of that plot as it lay bleaching in the autumn and winter rains was not inviting nor at all promising. The frost powdered down the clay, but that did not do much to take away its adhesive character, and it was evident before seeds of any kind could catch on, that something more must be done. I set the cart to drive a few loads of old (mellowed with age) leaf soil, which was forked and reworked into the clay previous to seed sowing, so that the surface was in a very fair condition indeed for the first crop. Still, I was not very sanguine of success. However, my Carrots and Onions,



Cornus brachypoda variegata. (See page 150.)

will be astonished to learn that the cure was not of a permanent nature. The mode of operation was simply carting away a part of the garden soil and refilling the excavation with a compost of peat, sand, rotted dung, and leaf mould. The first and second years gave capital crops, but afterwards the Carrot fly found its way into the area, and matters were as bad as ever. After the considerable expense incurred by the formation of this experiment, I naturally had recourse to every declared remedy, with the effect that ever since then I lost every particle of faith in topical treatment for the prevention or cure of the attack. The salt treatment of any was the best, but I laid the task before myself to grow Carrots without any artificial means beyond the thorough tillage of the soil of the garden, whatever that might be. I found long since my "dream" realised, and in this simple matter lies the secret of successful Carrot growing.

The garden here was one of those designated as unsuitable for Carrot culture. I got to work as soon as possible, by trenching a break about 3ft deep, just the depth of drainage. To my horror, at the first spit I found only 1½in of black soil, all the rest under this was blue clay. Well, thought I, if I am to do anything at all, it is clear these soils must change places. This settled, I set two men to wheel into the trench vegetable refuse, and then filled it up with well rotted dung, while two other men dug the soil over.

The first spit being turned, another liberal supply of rotted

Parsnips and Beets were everything that could be desired, and have continued to be so ever since. I grow them on the same plot, and only give dressings of leaf soil and pure horse droppings each year.

This year I have been walking through my Carrot rows, and the foliage reached half way above my knees, a height of not less than 2½ft. I do not grow any but the three following good old sorts: James' Scarlet, Long Red Surrey, Altrincham Improved. The soil for Carrots does not appear to me to be of so much moment as its porosity, without being of a nature that its moisture is readily absorbed by evaporation. The disease is also, in my opinion, an effect of indifferent tillage rather than an actual disease. Perhaps this theory has wider ramifications than we are at present ready to admit. Leastwise, we know much can be done by good treatment to ward off many of the ills of plant life. Therefore it is not by any means incongruous to suppose that by adhering to the principles likely to be conducive to health, many disastrous diseases may become quite unknown, and in time perhaps become eradicated altogether.—D. C.

[Mr. Geo. Chaplin, gardener at St. Leonards, Edinburgh, succeeds in growing splendid exhibition Carrots. He trenches his stiff soil, makes holes at 6in or 8in apart, in lines; fills these with light compost; sows three or four seeds carefully in each; thins the few seedlings early; then mulches between the rows with mown lawn grass. The fly is baffled.—Ed.]



Stocks for Roses.

In last week's Journal three communications appear in the Rose column which seem to call for some comment from an old contributor. "D. A.," in his otherwise very interesting note, seems apparently to have confounded petals with leaves throughout, and one feels sorry that "S. F.," with his love for the queen of flowers, should not have better varieties on which to feast his eyes; but "Surrey Hills" takes one back in imagination twenty years ago, at least. At that time, if correspondence flagged in the Journal, whether winter or summer, it only required a casual recommendation of either the Briar or the Manetti as a stock, to start at once a lively argument with two or three vigorous correspondents on either side. But it died out at last. I did not think it was possible to renew it. I do not know that the Manetti men actually owned themselves vanquished, but the consensus of opinion in favour of the Briar became at last so general among nurserymen and amateurs, and for all soils, that I fancied it was altogether agreed upon.

It must be a good many years ago now that I remember Mr. Geo. Paul complaining that he could not sell plants on the Manetti. It used to be said that the Manetti, which roots a little deeper than the Briar cutting, though not nearly so deep as the Briar seedling, was more suited to light soils; but this proved not to be the case in practice, except with very strong growing varieties, as the numerous coarse strong roots of the Manetti could not thrive without strong growth to balance them, and the result was sooner or later a failure. About that time it was also supposed that clay, or at least really heavy land, was necessary for Roses on the Briar stock; and when this, too, was proved to be a fallacy, when it was shown that good rich land (though a tendency to greasiness is desirable) is all that the Briar requires, even for the best H.P.'s, the triumph of the Briar became complete. The Manetti is still used for indoor propagation, and for such strong growers as Crimson Rambler and the Penzance Briars. I think it should not be used even for these, for I saw a good many Manetti suckers lately, unrecognised by the gardener, in a hedge of Penzance Briars; but it is such an easy stock to work that there is much temptation to use it.

But "Surrey Hills" also revivifies an even older controversy. About once every year someone used to write, proclaiming as a new discovery that Roses would grow on their own roots; that he had struck Roses as cuttings, and had some beautiful flowers. How beautiful these flowers were compared with those on the Briar stock of course the readers of the Journal had no means of judging; but, once again, the opinion of all rosarians, except one or two prejudiced against all plants worked on alien stocks, was unanimous against own root Roses, and in favour of those on the Briar stock. Our Manetti friends now came to the rescue. Plant the Manetti worked Rose deep enough, and it will throw out roots of its own. You will thus have both, and a plant of extra strength.

If the poor Rose plant were asked, what would it say? "I was obliged, in utter despair, as a Vine throws out air roots, to send out roots nearer the surface, or I must have perished entirely; for the stock roots, on which I was budded, were simply buried, not planted, far away from the life-giving influences of sun and air, and the food supplying surface bacteria. 'Surrey Hills' budded me 4in deep, and, of course, the roots were deeper still." A Rose plant thus planted too deeply will always try and remedy the mistake if it can by throwing out feeble fibres nearer the surface; but such roots as these can hardly do more than just keep the plant alive. Only in the extra vigorous varieties, such as those already mentioned, can good healthy plants be formed by such means, with much waste of time.

It appears, too, that "Surrey Hills" forces his buds into growth the same year as the budding, I suppose by cutting away the Manetti growth above. This would act as a further check to the plant, which could never have been good with the stock planted so deeply that it can be budded 4in below the surface. Let "Surrey Hills," even on his light soil—my own is similar—not be afraid of the Briar stock or of shallow planting and rooting. Let him enrich his soil to the utmost with manure and humus if he cannot get good heavy loam, and cultivate the surface assiduously with hoe and liquid manure, and I think, if he tries it fairly, he will say that neither own roots nor Manetti will give such good Roses as the shallow roots of the Briar.—W. R. RAILLEN.

P.S.—On reading the letter of "Surrey Hills" a second time, it seems most probable, as he speaks of a disastrous year, has lost plants on the Briar, and found roots on the stems of his old

plants, that he has planted them all too deeply—a common mistake, which has brought misery and death to thousands of valuable and otherwise well cared for plants.—W. R. R.

Evergreen Shrubs for Seaside Planting.

COMMON HOLLY (ILEX AQUIFOLIUM).—The common Holly ought, perhaps, to have been placed with the trees, as it attains to a considerable height in sheltered positions and favourable soils. It does well by the sea, but not in the full brunt of the ocean storms, though it never flinches, but stands out boldly to the sea breeze. Its golden variety is equally at home by the sea, and also many others, including the very handsome Balearic or Minorea (I. a. balearica) and Hodgins' (I. a. Hodginsi).

ESCALLONIA MACRANTHA.—This very handsome shrub succeeds admirably on the sea coast, and forms a good hedge or shelter plant. Its crimson-red flowers are freely produced. It does particularly well trained against a wall, and thrives in northern parts as well as southern of England.

OVAL-LEAVED PRIVET (LIGUSTRUM OVALIFOLIUM).—This does well either as a shrubbery or as a hedge plant on the sea coast, and succeeds in all but wet soils.

BOX (BUXUS SEMPERVIRENS).—The common Box and its varieties thrive fairly well by the sea, especially on free and calcareous soils, but does not care for the full force of the ocean storms, hence should have shelter, and for covert is unique, as it is one of the few subjects that ground game do not eat. In this connection may also be named the Spurge Laurel (Daphne laureola).

GRISELINIA LITTORALIS.—This New Zealand shrub succeeds on the coast, withstanding the sea wind well.

AUCUBA JAPONICA and its varieties, also EUONYMUS JAPONICUS and vars., succeed on the sea coast with moderate shelter, or when not in very exposed situations. Similar remark applies to BERBERIS AQUIFOLIUM and B. DARWINI, both of which produce an abundance of purple berries much relished by birds and game.

THE SWEET BAY (LAURUS NOBILIS) and PORTUGAL LAUREL (CERASUS LUSITANICA) are valuable for seaside planting, affording a considerable amount of shelter, but they are not suitable for exposed positions, hence are best employed where the direct force of the sea blast is broken up. Where this is the case the LAURUSTINUS (VIBURNUM TINUS and vars.) succeed, and are very ornamental. Similar observation attends the STRAWBERRY TREE (ARBUTUS UNEDO) and its varieties.

TEA TREE (LYCIUM BARBARUM).—Under the term of Tea Tree come the species L. afrum and L. chinense, the latter very closely allied to the European Box Thorn (L. europæum), which forms capital hedges with a few stakes driven in here and there in the line of fence. Hedges of this species are made on sea banks, and grow so densely that it is not possible to see through them. It will grow in apparently pure sand, and even where washed by the waves. The first named species is, perhaps, the best for training against trelliswork, covering arbours, and clothing walls, but all are suitable for such purposes, and thrive well in any well-drained and porous soil.

GARLAND FLOWER (CLEMATIS MONTANA).—This has few equals for covering summer houses and training to walls or trelliswork. HONEY-SUCKLES (LONICERA PERICLYMENUM and vars.), also L. SEMPERVIRENS, do well.

EVERGREEN THORN (CRATEGUS PYRACANTHA and vars.) is quite charming by its berries in autumn and winter. It is well suited for clothing a large area of wall, as also is the SMALL-LEAVED COTONEASTER (C. MICROPHYLLA), its coral red berries being very beautiful. SIMONS' COTONEASTER (C. SIMONSI) is well adapted for training on walls and other naked erections, it berrying very profusely and handsomely.

COMMON JASMINE (JASMINUM OFFICINALIS) grows famously, and produces its white fragrant flowers from June to September, and later on. Indeed, it often keeps on blooming until the Naked-flowered Jasmine (J. nudiflorum) comes into flower, and blooms through the winter. Both grow very rapidly, and are good for either trelliswork or walls.

IRISH IVY (HEDERA HELIX CANARIENSIS).—For clothing tree stumps or unsightly wood or stonework, and for north or other walls, as well as for forming a green carpet under trees or on banks, this evergreen rivals all others in doing its work quickly and effectively.

Roses of varied types do fairly well, the general favourite for climbing being Gloire de Dijon.—G. ABBEY.

The Crosfield Conservatory, Warrington, Lancashire.

The Crosfield Conservatory, presented by Mrs. John Crosfield, is for the future to be the home of the grand pyramid Camellias, which have on many occasions been noticed in your columns, and which were certainly the glory of Lancashire and the pride of Walton Lea, Mr. Crosfield's residence. The Mayor of Warrington, in accepting the gift on behalf of the town, alluded to the kindness of the Crosfield family, and said the gift would be highly appreciated.—R. P. R.

NOTES & NOTICES

York Gala, 1904.

The new secretary of the Grand Yorkshire Gala (Mr. Fred Arey) informs us that next year's Gala has been fixed for June 15, 16, and 17.

United Horticultural Benefit and Provident Society.

The monthly committee meeting of this society was held at the Caledonian Hotel, Adelphi Terrace, Strand, W.C., on Monday evening last. Mr. Thomas Winter presided. Seven new members were elected, and one other nominated. Four members are receiving sick pay, and eight are on the benevolent fund at the present time. Three other members have been relieved from this fund this year.

Sussex Weather.

The total rainfall at Abbot's Leigh, Hayward's Heath, for the past month was 4.31in, being 1.60in above the average. The heaviest fall was 1.61in on the 23rd; rain fell on fifteen days. The maximum temperature was 83deg on the 2nd; the minimum 41deg on the 8th. Mean maximum, 72.28deg; mean minimum, 51.01deg; mean temperature, 61.64deg, which is 1.20deg below the average. From June 20 to July 15 we in Sussex enjoyed a period of brilliant weather, which did much good in putting a little warmth in the ground, and benefiting fruit crops, especially Strawberries, which were suffering from want of sun and too much rain. Since the latter date the wet has been disastrous. Only on two days of the sixteen rain did not fall. Much small fruit split and rotted, it being impossible to get them dry for preserving. Potato disease in second early sorts is very prevalent.—R. I.

July Weather at Belvoir Castle.

The prevailing direction of the wind was S.W., total eight days. The total rainfall was 1.82in. This fell on twelve days, and is 1.00in below the average for the month; the greatest daily fall was 0.78 on the 23rd. Barometer (corrected and reduced): highest reading 30.320in on the 9th at 9 p.m.; lowest reading 29.578in, on the 16th at 9 p.m. Thermometer: highest in the shade, 85deg, on the 10th; lowest, 40deg, on the 8th; mean of daily maxima, 68.41deg; mean of daily minima, 51deg; mean temperature of the month, 59.70deg; lowest on the grass, 34deg, on the 8th; highest in the sun, 134deg, on the 2nd; mean temperature of the earth at 3ft, 57.83deg. Total sunshine, 174hrs 55min, which is 17hrs 47min below the average; there was one sunless day. The above mean temperatures are all much below the averages for the month.—W. H. DIVERS.

Munificent Gift to the R.H.S.

Sir Trevor Lawrence, President of the Royal Horticultural Society, announces that Sir Thomas Hanbury, whose place at La Mortola has a world-wide fame, has purchased for presentation to the Society the estate and garden of the late Mr. G. F. Wilson, F.R.S., at Wisley, near Woking. The place has long been celebrated, and the skill and success with which hardy plants have been cultivated there for many years show how suitable it is for the purposes for which it has been selected by Sir Thomas Hanbury. The total area of the estate is sixty acres, part of which is used for agricultural purposes. There are a small residence, a farmhouse, and other suitable buildings on it. The variety of soil and aspect, and the unfailing water supply, are essential for the purposes of the Royal Horticultural Society, which will have little to do but to provide the necessary plant houses. Sir Trevor adds: "The Fellows of the Society owe a heavy debt to Sir Thomas Hanbury for his thoughtful and generous gift. All lovers of gardens will gladly know that Mr. Wilson's garden has been rescued from the fate which so often overtakes such pleasaunces when their creators pass away. Now that the Royal Horticultural Society has received this gift, there is every reason to hope that its centennial year, 1904, will see it provided with a new garden, as well as, thanks to Baron Henry Schröder, with a new metropolitan hall and offices."

Gardening Appointments.

The following notice of appointment came to us three weeks ago, but has been unfortunately omitted from our pages till now: Mr. James Moir, late of Earnock, N.B., has been appointed head gardener and manager to J. A. Shepherd, Esq., Delvine House, Dunkeld, Perthshire.

Fruit Growers and Railway Rates.

The Earl of Onslow, President of the Board of Agriculture, addressing a meeting in the Town Hall, Maidstone, in connection with the National Fruit Growers' Federation, said fruit growers, by joining together, could send by the railways larger quantities of produce at lower rates than for smaller quantities.

Liverpool Amateur Gardeners.

One of the finest August exhibitions of this society was held on Thursday evening, in the Common Hall, Hackins Hey. The Cactus Dahlias were a great feature, Mr. E. Paddock's first prize lot calling for more than ordinary mention; Mr. Wallace coming second. The Carnation class for Messrs. Cassell and Co.'s special prize caused a keen competition, and Mrs. Stevenson led. Double and single Begonias were in abundance. There were only two table decorations, both pleasing. Mrs. McGregor was first with a light arrangement of pink and white Carnations and Gypsophila; Miss McCauslane second with scarlet Pelargoniums, Asparagus plumosus, and A. Sprengeri. Mrs. Thomas clearly led the way for cut flowers; while Mr. Hitchmough was second with fine Roses and Clematises. The time occupied by the judges was profitably spent by members in answering questions.—R. P. R.

Royal Horticultural Society's Notices.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, August 18, in the Drill Hall, Buckingham Gate, Westminster, 1—5 p.m. A lecture on "Hollyhocks" will be given by Mr. Webb at 3 o'clock. * * At a general meeting of the Society held on Tuesday, August 4, twenty-five new Fellows were elected, among them being Sir Josslyn Gore Booth, Bart., Col. the Hon. G. Napier, Major-General H. H. Lee, and Major Bernard J. Petre, making a total of 1,070 elected since the beginning of the present year. * * The Society will hold a special exhibition of Dahlias on September 1 and 2, in conjunction with the National Dahlia Society, in the Drill Hall, Buckingham Gate, Westminster. At this meeting only Dahlias can be shown, with the exception of flowers, fruits, &c., for certificate. All Dahlias, including those shown for certificate, must be left on exhibition until 6 p.m. on the second day, but other plants may be removed as usual. For schedule of prizes see Royal Horticultural Society's "Book of Arrangements" for 1903, pp. 89 to 93, or separate schedules can be obtained on application to Mr. P. W. Tullock, Sterndale, New Church Road, Hove, Sussex, secretary to the National Dahlia Society. A lecture on "Judging Cactus Dahlias" will be given on September 1 by Mr. C. G. Wyatt, at 3 o'clock.

Chiswick Conference and Gardeners' Dinner in London.

Visitors coming to the Chiswick Show from off the South-Eastern, Chatham, and Dover, or Brighton Railways, should travel from the respective termini to Chiswick by the Metropolitan District Railway to Hammersmith, thence per electric tram to Turnham Green Church, or by Ealing trains to Acton Green Station. * * Those coming from Liverpool Street, King's Cross, St. Pancras, Euston, Great Central, and Paddington terminuses should travel by the Metropolitan Railway from the nearest stations to Hammersmith, and thence per electric tram. * * Those coming from Central London should travel by the Tube Railway to Shepherd's Bush, thence also per electric tram. * * Turnham Green Church is close to the gardens. * * Visitors coming per South-Western Railway main line should change at Clapham Junction, thence per loop line train to Kew Bridge, and thence per electric tram. * * Those coming from off the Windsor, Reading, and Thames Valley lines should change at Richmond, thence per frequent trains to Gunnersbury Station. All bringing heavy parcels can obtain cabs at Kew Bridge, Gunnersbury, and Turnham Green Stations. * * Visitors to the show purposing to attend the Gardeners' Dinner at the Holborn Restaurant should take tram from Turnham Green Church to Shepherd's Bush, thence per Tube Railway to the British Museum Station.



Sarracenia Stevensi.

Though the *Sarracenia*s are so beautiful and interesting, they are not much cultivated. Their requirements are simple, an intermediate temperature and a plentiful supply of moisture at the root being what they like. The compost should be fibrous peat, chopped sphagnum, some sherds, and charcoal pieces. *S. Stevensi*, which we figure on another page, is hybrid from *S. flava* and *S. purpurea*. It is purple, with crimson veins, the lid being crimson and crisped. The chief trade grower of *Sarracenia*s is Mr. A. J. A. Bruce, of Chorlton-cum-Hardy, near Manchester.

Roman Hyacinths.

A batch of medium sized, firm bulbs ought to be secured from a reliable nurseryman and forthwith potted, 5in pots being the best size, these usually holding four bulbs. Extra large bulbs will not be easily accommodated, and should have larger pots. See that the pots are clean, dry, and moderately well crocked. Make up a compost of loam, leaf soil, sand, and a little decomposed manure mixed in. Fill the pots loosely with soil, and work it down so that the bulbs, when arranged, have their tips just below the surface. Do not press in the bulbs too firmly, or make the base hard on which they rest; for if the roots, when forming, meet with too firm material, they will force the bulbs out of the pots. Give a gentle watering after potting, and when the soil has drained place the pots in a sheltered corner outside, or in a frame, and cover with clean, fine ashes a few inches above the pots. Here they may remain for several weeks until roots begin to form freely, which will be known by growth commencing. Then bring out the pots and gradually expose the growth to full light. Give water as required, with cool, airy treatment, until later on in the autumn, when the pots may be transferred to a greenhouse shelf. Early potted bulbs making good growth will bloom freely in November and December without much forcing. The object should be to secure plenty of roots, good growth then following and flowers produced in plenty. Successional batches of bulbs should be potted to prolong the season.—E. D. S.

Trees Carnations

Provided one has an ordinary warm greenhouse, even the veriest amateur need not despair of having a good supply of these popular buttonhole flowers during the winter months. Between now and September good plants, costing about 1s. 6d. or 2s. 6d. each, should be obtained and housed, heat being given from October onwards. Naturally, as the popularity of a flower increases, so does the number of varieties. Among the sorts seen in florists' windows the most popular, perhaps, is the pink Mrs. Leopold de Rothschild or Mdle. Thérèse Franco. It is vigorous in growth and free flowering, but inclined to splitting, which spoils the beauty of an otherwise perfect flower. A better flower, I consider, and a more pleasing shade of pink, is Miss Jolliffe Improved; but in the opinion of most I suppose the popular "Franco" holds sway. Wm. Robinson, for a dazzling scarlet, is unequalled, and its strong, sturdy appearance when well grown is a good addition to a greenhouse.

Mrs. Thos. Lawson is a sweetly scented, rosy cerise pink. It is hardly a colour likely to please in the daytime, but under an artificial light it assumes an unexpected richness. Uriah Pike, though not classed by some growers as a winter flowering Carnation, is admired as much for its strong Clove scent as for its rich crimson colour. Earl Roberts, a pure yellow, is the best of this colour, producing well formed blooms. For a white one is at a loss for a really fine variety, but Deutsche Braut, La Nieve, or Miss Mary Godfrey may be mentioned. Judging by appearances it seems to be that yellow or white is not a popular colour in a winter Carnation.

Other good varieties are Countess of Warwick, crimson; Winter Cheer, crimson scarlet; John Peed, very deep pink; Mrs. Richard Ley, salmon pink; Pride of Exmouth, salmon pink; Western King, rich apricot.—J. W.

Cereus grandiflorus.

From Messrs. Cannell and Sons we have received a very large flower of this night-flowering *Cereus*. This Swanley firm have perhaps the best trade collection of Cacti in the United Kingdom.

Cornus brachypoda variegata.

Though now a dozen years or more known to us, we find only a few samples of this decorative shrub about in gardens or parks. It was certificated when Messrs. J. Veitch and Sons, Ltd., sent it before the Royal Horticultural Society's Floral Committee in 1894. The leaves are nearly 4in long, the centre of each being pale green, blotched with a deeper shade, and the deep margin is creamy white. As a soft, dwarf shrub it is effective.

The Fruit Crops.

Exceptionally large consignments are arriving from Germany, where the weather this year has been much more conducive to fruit culture than in England. Plums and Green Gages, which usually sell at from £8 to £16 a ton, are fetching from £32 to £64. Dealers are fearful lest foreign fruit, which is generally excellent in quality, should eventually oust home grown products. The first consignment of Californian Pears, comprising 10,000 cases, has arrived at Covent Garden, and is realising about 10s. per case of seventy Pears.

Vitality of Seeds.

Last year a systematic effort was begun in the Department of Agriculture to determine how long seed vitality was retained under different conditions of storage and climate. To this end boxes containing five packages each were sent to different parts of the country, and to the West Indies, and arrangements made to have them stored. All possible variations of climate were selected for tests, and the experiments are being conducted with as much uniformity as possible. It is now nearly a year since the seeds were sent out, and instructions are issued directing that the first of the five packages be returned to Washington with a statement of the conditions under which it was stored, the temperature variations it was subjected to, and the relative humidity of the place. Next year the second package of seeds will be called in, and so on for the five years. The seeds, after being returned, are to be carefully tested to ascertain how well they withstood the conditions imposed upon them.—("American Gardening.")

Vitis, syn. Ampelopsis.

Surely there is nothing to equal the well known *Ampelopsis* (*Vitis* of Linn.) and its varieties, for rapidly covering blank walls, arches, and trellises. Its best recommendation, perhaps, is that it adapts itself in most of its kinds to either a sunny or shady aspect. Care should be exercised when planting to secure strong plants, and to see that they are carefully planted without disturbing the roots any more than can possibly be helped. The plants are usually obtained in pots, and if strong, the roots will often be found to have grown considerably through the drainage hole. It is very much better to place the plant, as received, in position and smash the pot before covering over, making firm, leaving the roots to break through themselves when growth in their new quarters commences. *Ampelopsis* *hederaea*, the common Virginian Creeper, is perhaps the most vigorous grower. If care is taken in training it many an unsightly place may be covered up, where the more popular *A. Veitchi* (*V. inconstans*) would be a failure on account of its upward growth. *A. Veitchi* is undoubtedly an exceedingly pretty species, gaining its popularity no doubt through its self-clinging propensity, though there are others quite as effective in growth and colouring as the original. *A. Veitchi purpurea* is quite as hardy and vigorous, the difference being in the colour, which is of a purplish shade throughout the summer. *A. Veitchi atropurpurea* is even darker in colour. *A. japonica* Hoggi is a large-leaved, self-clinging variety, very vigorous, and has an attractive rich dark colour. *A. sempervirens* is a very close growing evergreen kind, but a weak climber, requiring a southern aspect. There is a variegated form, *A. quinquefolia variegata*, which requires glass protection; it is also exceedingly graceful when suspended. It should always be borne in mind that the *Ampelopsis* is a strong grower, and the better the cultivation the quicker will it spread, and the better the result in other respects.—J. W. J., Oswestry.



The Rock Garden, Birmingham Botanic Garden.



Scene in Birmingham Botanic Garden.

Birmingham Botanic Garden.

Amongst the gardens sustained by private subscriptions and devoted to the practical application and exposition of botany, the one at Edgbaston, Birmingham, enjoys considerable esteem. In so large a city as the one just named, a "teaching" garden that provides representative material for the botanist, and furnishes lessons and leads the way in horticulture, is of the highest utility and much importance, so that for many years to come we may look to Birmingham Botanic Garden as one in the forefront.

We figure this week two views from the garden. The rock garden scene hardly could be expected to do justice to this fine feature of the fairly extensive grounds. It covers about an acre in all, and was artificially constructed by the late Mr. James Backhouse, of York. The work does that great gardener infinite credit, and a meed of praise was written several years ago in these same pages. The heavy and massive boulders are of sandstone, placed in position after Nature's model, and these are now clothed or partly screened with suitable shrubs and plants. In the centre of the scene, at the base of the main bank of rockery, and flanked by the lesser rock formations on either side, is a water pool having its complement of plants.

Engraven on a brass plate which is fixed upon a stone at one side of the rock garden, the visitor reads:

To commemorate the invaluable services to the society, first as honorary secretary, and later as chairman of committee, this purchase of ground, laid out for the reception of rock and bog plants, is named the Hugh Nettleford Alpine Garden. May 29th, 1895.

This is not the place to enlarge on the construction of rockeries, large or small; but it may serve a useful purpose if the names of the more prominent subjects are given. They include *Menziesia empetrifolia*, double flowering Gorse, various *Rhododendrons* (also *Azaleas*), *Spiraea palmata*, *Yuccas*, a collection of hardy Bamboos (*Phyllostachys viride-glaucens*, *Arun-denaria nitida*, *A. Hindsii*, *A. pumila*, *Bambusa Metake*, &c.), *Ailantus*, *Smilax rotundifolia*, *Cotoneaster horizontalis*, *Veronicas*, notably *V. cupressoides*, and other shrubs. Amongst plants there are *Galax aphylla*, *Primula japonica*, *Iris pseudo-Acorus*, *Caltha palustris*, *Menyanthes trifoliata*, *Scirpuses*, and other bog subjects; while in the period of the Daffodils this year we were further able to note in the general rockery *Iberises*, *Thymes*, *Sempervivums*, *Geraniums*, *Dianthus*, *Cistuses*, *Muscari* (and many other bulbous flowers), *Orchises*, and *Hieraciums*. At the present season of the year there will certainly be a varied and most interesting display.

The second view depicts a view of a border near the range of glass houses. The keeping of these gardens will be in the best of hands, under the superintendence of Mr. Humphreys, the new curator, who goes there in October.

Societies.

R.H.S., Scientific Committee, August 4th.

Present: Dr. M. T. Masters, F.R.S., in the chair; Messrs. Hooper, Saunders, and Bowles; Dr. M. C. Cooke, Revs. W. Wilks and G. Henslow, Hon. Sec.

Late-flowering Plums, &c.—Mr. Hooper had noticed that various modifications occurred in flowers of fruit trees at the present time. Petaloid sepals and semi-doubling of petals with two carpels, forming twin Plums, were not uncommon. It was observed that in the common cultivated double Cherry there are always two foliaceous carpels present. Pear trees, &c., have also produced a second crop of flowers, which are borne on the ends of the young shoots instead of on spurs.

New Crocus.—Mr. Bowles exhibited dried specimens and drawings of *C. caspius* from Russian Talych, S.W. Caspian, with a white flower tinted with rose. He also showed the autumn-flowering *C. Scharojani* from the Caucasus. It is of an orange colour, and carries the leaves of the last season simultaneously.

Papaver pavoninum.—Mr. Wilks showed a plant from Central Asia (see "Garten Flora," 1882, page 296, Taf. 1095) remarkable for a crescent-shaped black band near the base of each petal.

Cucumber diseased.—Mr. Davis, of Bitton, Bristol, sent roots of Cucumbers which failed. Mr. Saunders reports as follows upon them: "I found that the extreme base of the stems were attacked by small worms belonging to the family Enchytracidae, which are nearly related to the earthworms, and are well-known pests at the roots of plants; they were undoubtedly the cause of the unhealthiness of the plants. Lime water will kill them in a few minutes if it can be made to reach them; thoroughly drenching the soil with this fluid might be of use, though I do not know what effect it might have on the plants. They, however are so injured, that I should imagine the best thing to do would be to pull them up and burn them, and burn or bury deeply the soil in which they grew."

Cucumbers diseased.—Dr. Cooke reported upon some fruit badly attacked received from the neighbourhood of Bristol. It appears to be due to a fungus new to science, which he has named *Cladosporium scabies*. A full description will be recorded in the "Journal" of the R.H.S. He strongly recommends "that all diseased fruits be removed and destroyed at once, and those remaining should be sprayed to preserve them from attack. Condy's fluid, diluted, should be tried as less likely to injure the fruits than copper solutions. No effort should be spared at once to stamp out the pest."

Frome, August 3rd.

The twentieth annual exhibition of the Frome Horticultural Society was favoured with a record attendance, due to the popularity of the show, the Bank Holiday, and fine weather. Not only was there this increased attendance, but an appreciable extension of entries and certainly a higher state of all-round quality.

Groups, for which there were four entrants, were never better, indeed, probably not equalled before, and Messrs. Cray and Sons, who made their maiden entry in summer grouping, certainly eclipsed all former efforts. *Liliums*, *Campanulas*, *Cattleyas*, *Odontoglossums*, *Oncidiums*, brightly coloured *Codiaeums*, and a pair of very fine *Cocos Weddelliana* formed a combination both effective and choice. Mr. Pope, gardener to Charles Baily, Esq., was a very good second; Messrs. E. S. Cole and Son, Bath, and Mr. Cutter, gardener to Mrs. Le Gros, were given equal thirds. Specimen *Fuchsias* made a very good show, Messrs. H. Pocock, Hilpert, and W. Cooke staging in six varieties. Messrs. Strugnell (gardener to Col. Ralph Vivian) and Cutter won with specimen foliage plants. Messrs. Stokes and Son staged the best twelve Ferns or Mosses, *Alsophila excelsa*, *Asplenium nidus*, *Adiantum fragrantissimum*, *A. decorum*, and *Pteris Mariesi* being their finest plants. Mr. Pope was a good second. Mr. Geo. Tucker excelled with six specimen flowering plants, and also a single specimen. Groups of Tuberous *Begonias* were very fine in flower and effect, Messrs. Stokes, Fry, and Pope staging excellently.

Non-competitive groups from the Marquis of Bath (gardener Mr. A. Gandy) and the Earl of Cork (gardener, Mr. Pearce) were a striking feature in the plant tent. In the first named a margin of vigorous little specimen *Caladium argyrites* were much admired, as were also *Eulalias*, *Codiaeums*, and *Palms*. The Marston collection predominates in brightly coloured *Codiaeums*, and always commands well deserved praise from visitors.

Cut flowers occupy a deal of space, and despite the ungenial summer were as fine and numerous as ever. Roses made a good show, as also did annuals, Carnations, herbaceous, and stove flowers. Dahlias, too, and Asters, for so early a date, gave a bright touch of summer colour. With Dahlias in four classes Messrs. Cray and Sons, as usual, won easily.

Table decorations of wild and garden flowers creates a large interest among lady competitors, the spacious market hall for the time being transformed into a floral instead of a merchants' emporium. There were no less than seventeen entries in these classes. Prizes are offered to children who have made 80 per cent. of attendances at any Frome School, and the interest may be fairly gauged by the large entry, forty-four in numbers. Not more than three vases are allowed.

Despite the general shortness of fruit crops, the classes here were very well filled, and Apples, of which there were twenty-two entries, were particularly good. For a collection of six dishes of fruit Mr. Strugnell was first, showing as his best Pine-apple Nectarines, Triumph Melon, and Dymond Peaches. A. G. Hayman, Esq. (F. Ackland, gardener), was second, and J. H. Shore, Esq. (H. Parfitt, gardener), third. With black Grapes Mr. A. Taylor, gardener to A. R. Baily, Esq., staged some remarkably fine Black Hamburgs, and the same exhibitor won with Muscat of Alexandria in the corresponding class for white. The Fruit and Flower Co. won with fine Sea Eagle Peaches, and Mr. Strugnell with good Stanwick Elruge Nectarines. Mr. Fisher, Batheaston, took the lead with dessert Apples, and Mr. Keevil, Wells, scored with culinary. Messrs. Strugnell and Fisher staged the best collections of hardy fruit, and the first-named won with a Melon. Mr. Hall, Bath, with Grimwood's Matchless, won with Plums, really a good early kind of the Orleans type.

Vegetables were plentiful and uncommonly good, Peas, Potatoes, Tomatoes, and Cucumbers especially so.

Sheffield Horticultural, August 3rd.

The annual show of the Sheffield Society was held under favourable conditions as regards weather and exhibits; but owing to colossal counter attractions proved a heavy financial loss, which is much to be regretted, after the efforts that have been put forth to secure a show worthy to rank amongst the best. The society is certainly to be commiserated with on its bad luck, but must be congratulated on the patronage it has secured, i.e., His Grace the Duke of Norfolk, who, with his

sister, Lady Mary Howard, twice visited the show during the day, and evinced much interest in some of the exhibits, particularly the Roses, and in response to the request of the secretary His Grace consented to become president of the society. Lady Mary Howard was delighted to accept, through the secretary, some lovely Roses from Mr. H. V. Machin.

THE GROUPS.—In all six groups were entered for competition. The first in the "Open to all" (150ft) was won by Messrs. Artindale and Son, who had some good Crotons, Liliums, Carnations, &c. The first in the gardeners' groups (open, 96ft) going to Ald. Geo. Senior, J.P. (gardener, Mr. R. C. Baker), who had a very good collection of plants, Mr. C. Cook being second, and Mr. F. Pollard (gardener to F. Greenwood, Esq.), Pitsmoor, third. Very good plants were in this group, but these were somewhat lacking in colour.

ROSES.—In the class for twenty-four blooms Messrs. R. Harkness and Co., Hitchen, were again successful, lifting the challenge cup for the second time in succession. Messrs. Townsend and Son, Worcester, were a good second, and H. V. Machin third. In the class for eighteen Messrs. Townsend and Son were first, Harkness and Co. second, and H. V. Machin third. For twelve, dissimilar, the same exhibitors were again placed in the order named; while for twelve Teas Messrs. Townsend were again first, H. V. Machin second, and Harkness and Co. third. In the amateurs' class H. V. Machin took first in both classes; also for premier bloom with Her Majesty.

Dahlias were a short entry, but for dinner table decorations there were five competitors, Mr. Marsden, gardener to Major Blake, Ecclesall, securing premier honours. Mr. Wagg, Ossington Gardens, Newark, was second, and Artindale and Son third. Grapes were good in quality, as also Peaches and Melons. A class for fruiterers produced six exhibits of twelve dishes of fruit of good quality, and, considering the season, fruit and vegetables were good all round.

It is very noticeable that as a rule the local nurserymen held severely aloof from exhibitions, and, though depending on the garden loving public for their patronage and support, they play a questionable policy in withholding all assistance in local shows. There are one or two praiseworthy exceptions in Messrs. Artindale, Seagrave, and Ellis, and to the two latter medals were awarded for non-competitive exhibits. Mr. Artindale readily admits the advantage derived in the way of trade from such exhibits.

Dudley, Worcestershire, August 5th and 6th.

Favoured by fair weather, the second annual exhibition was held in Buffery Park. The show proved to be a great improvement upon the initial one held last year, partly due to the increased substantial prizes offered by the committee. It should be remarked, that owing to the unavoidable absence of the hon. secretary, Mr. H. Dickinson, during the day's proceedings, an efficient substitute was found in Mr. Wellings, one of the committee.

The £10 first prize for twenty stove or greenhouse plants was won by Mr. W. Vause, of Leamington, with several good specimens among them; second, Mr. S. Coster, gardener to E. J. Abbott, Esq., Handsworth. For a group of plants arranged for effect, the first prize of £12 10s. brought forth three contestants, and Mr. W. Vause won first honours; Mr. G. Hancox annexed the second; and Mr. W. Smith third. In addition to the foregoing, other collections of plants, such as Dracænas, Fuchsias, Caladiums, Begonias, Gloxinias, and exotic Ferns, were fairly well shown by several exhibitors.

There was a keen rivalry for nine varieties of hardy herbaceous flowers, and here Mr. J. H. White, of Worcester, led; the second going to the Vineries Co., Acocks Green. Bouquets and other floral arrangements proved to be a striking feature, as also Sweet Peas. Messrs. Perkins and Sons, Coventry, won the first prize in the class for a basket of cut flowers; second, Mr. S. Rose, Smethwick; and third, Mr. G. Hancox. For a collection of Cactus or other decorative Dahlias Messrs. Rowe and Sons, Worcester, won the first prize with a beautiful collection; and Mr. W. Pemberton second. For twenty-four Roses Messrs. Perkins and Sons easily scored; the second prize falling to Messrs. Townsend and Sons, Worcester; and third, Mr. H. Wright, gardener to W. Waldron, Esq. Prizes were offered for collections of Gladioli. Mr. J. H. White, Worcester, was awarded the first prize for a very good collection, being the only exhibit. Mr. H. A. Canadine, Stourbridge, was placed first, Mr. C. Crooke second, and Mr. A. R. Goodwin, Kidderminster, third.

For the best display of plants and cut flowers arranged for effect on a table (for nurserymen only), Mr. H. Davis, Stourbridge, was awarded the first prize of £5, and Mr. W. Vause annexed the second prize.

Fruit was fairly well exhibited. For four dishes of hardy fruits Mr. C. Crookes, gardener to the Dowager Lady Hindlip, Droitwich, was placed first, and Mr. H. Wright second. For two bunches of black Grapes Mr. C. Crookes was again to the fore with very good examples of Black Hamburgh; second,

Mr. George Hancox, West Bromwich, with two huge berried bunches; and third, Mr. C. S. Suich, gardener to J. Graham, Esq., Dudley. For two bunches of white Grapes, any variety, Mr. C. Crooke had very well ripened Muscat of Alexandria; second, Mr. G. Hancox; and third, Mr. C. J. Smith. There were some good Victorias, and for a white flesh Mr. G. Hancox was first, Mr. C. Crooke second, and Mr. E. A. Hall, gardener to Major Lanthorpe, Holmworth, Cumberland, third. For a scarlet flesh variety Mr. E. A. Hall was awarded the first prize; second, Mr. C. Crooke.

Mr. Crooke had a very fine dish of Peaches, and Mr. H. Wright, gardener to W. Waldron, Esq.

Considering the abnormally late season vegetables were very well shown. Messrs. Webb and Sons, Wordsley, offered prizes for six distinct kinds. The first prize was won by Mr. C. Crooke; second, Mr. H. Wright; and third, Mr. G. Taylor, Coseley.—W. G.

Malton, Yorks, August 5th.

This society held its forty-fourth annual show in the Orchard Field, Malton, on August 5. The weather was somewhat threatening during the day, but with the exception of a slight shower or two, it was a beautiful day, and the exhibition was numerously attended. There was a slight falling off in some of the plant classes, but it was a very good show.

PLANTS.—The principal class was for six stove or greenhouse plants, dissimilar, in bloom. There were only two entries. Mrs. Kitchen, Darlington, easily secured first place with a very even lot and well flowered specimens. They were *Ixora Fraseri*, *Allamanda Hendersoni*, *Clerodendron Balfourianum*, *Bougainvillea glabra*, *Anthurium Andreanum*, and *Stephanotis floribunda*. Messrs. Simpson and Sons, Selby, were second. The same exhibitors were also placed in the same order for three ditto. Indeed, they carried off nearly all the prizes in the most important classes, which included six ornamental foliage plants, three ditto, and exotic Ferns. Messrs. G. Longster and Sons, Malton, had the best *Caladiums* and *Colcus*. A very good specimen Orchid, a *Cypripedium*, was staged by Mrs. Kitchen. There were also classes for *Pelargoniums*, *Begonias*, *Lilies*, and other plants, which were fairly well shown. The competition was keen for six plants for dinner table decoration in pots not to exceed 7in in diameter. Some splendidly grown plants were staged. Mrs. Kitchen secured premier honours, followed by Mr. McPherson, gardener to Earl Lonsdale, and Messrs. G. Longster and Sons. The same exhibitors also carried off the prizes for three ditto in the same order.

CUT FLOWERS.—The Show Dahlias were not so large as we have seen, and there was only one entry for twenty-four blooms, Messrs. Clark and Son, Rodley. The same exhibitor was first for twelve blooms, Mr. J. D. Hutchinson, Kirbymoorside, second. The latter was first for six Fancy varieties. Messrs. Clark and Son were first for Cactus Dahlias, Mr. G. R. Akester second. For six bunches of pompons Mr. Hutchinson had a nice stand, Mr. Whitehead, Appleton-le-Street, second. For twelve Carnations the Hon. Mrs. Duncombe, Nawton, took the lead, Messrs. H. Clark and Son second. Mrs. Duncombe was also first for six yellow ground varieties and six selfs. Messrs. Clark and Sons were the only exhibitors of twenty-four Asters. Sweet Peas were well shown, but the recent rains had somewhat spoilt many of the blooms. There were classes for twelve, eight, and four varieties, the Hon. Mrs. Duncombe being placed first in the first two classes, with fresh, lightly arranged exhibits; Mr. J. D. Hutchinson second. For four varieties the latter exhibitor was to the front, Mr. G. R. Akester second.

A good collection of eight varieties of herbaceous flowers was set up by Mr. J. D. Hutchinson, Mr. W. Dobson coming second. Roses were not so well shown as usual, Messrs. Harkness and Sons not exhibiting this year. For six varieties, three blooms of each, Mr. Hutchinson was an easy first, with fair blooms; Miss Cooper, Robin Hood's Bay, second. Mr. Hutchinson was also first for twelve and six blooms and six Tea Roses. Baskets of Roses were most tastefully arranged, the Hon. G. N. Dawnay first, Mr. Hutchinson second. Bridal bouquet: Messrs. G. Longster and Sons first, Mr. G. R. Akester second. These exhibitors were placed in the same order for hand bouquet.

FRUIT.—For four varieties Mr. McPherson was an easy first with Muscat of Alexandria Grapes, Bellegarde Peaches, Royal Jubilee Melon, and Smooth Cayenne Pine. Mr. C. Corner, Hutton Ambo, second; Mr. J. S. Upex, gardener to the Hon. H. W. Fitzwilliam, Wigganathorpe, third. There was only one entry for three bunches of black Grapes, the prize being taken by Mr. C. Corner. Mr. McPherson was first for three bunches of white Grapes, staging Muscat of Alexandria; Mr. Upex second with three good bunches of Foster's Seedling. The prizes for Peaches, Melons, Nectarines, and Apricots were won by Mr. McPherson, Mr. T. Hague, Carlton, and Mr. W. D. Horsley, Norton. The show of hardy fruit was very creditable for the unfavourable season.

Vegetables were good, but want of space will not allow details.

Messrs. G. Longster and Sons, nurserymen, set up a nice group of plants and cut flowers at the main entrance to the tent, for which they received an award of merit.

Upton, Cheshire, August 5th.

This show was held in the beautiful grounds of Upton Lawn, kindly lent for the occasion by John M. Frost, Esq. There were two attractive groups, the first prize going to Mr. E. Stubbs, gardener to Major MacGillycuddy, of Bache Hall; and second to Mr. J. Ford, gardener to B. Glegg, Esq. Mr. R. Makefield, gardener to Miss Humberston, staged magnificent herbaceous flowers. The table decorations were strikingly attractive. Major MacGillycuddy and Miss Humberston staged Roses in very good form, the former also winning in the white Grape class, and for an unusually good collection of vegetables. Mrs. T. Willis Taylor had the award for Sweet Peas, whilst Miss Humberston scored for Melon, Cucumbers, Tomatoes, dessert Pears, and Celery. Mr. F. Richmond was successful with Black Hamburghs and a collection of fruit. A fine display of herbaceous plants and Roses came from Messrs. Dickson's, Ltd., Chester.—R. P. R.

Midland Carnation and Picotee, August 6th and 7th.

The thirteenth annual exhibition was held in the Botanical Gardens, Edgbaston, and well upheld the traditions of the society. At the luncheon Professor W. Hillhouse referred to the absence of Mr. Robert Sydenham, who is sojourning in South Africa; also to the near retirement of the courteous curator of the gardens, Mr. W. B. Latham, who carries with him the esteem of all who personally know him. The hon. secretary (Mr. Herbert Smith) must be credited with success in the general arrangement of the show.

In the class for twelve selfs there was a keen competition amongst the seven combatants, the first prize being annexed by Mr. R. Cartwright with a grand complement of blooms consisting of Ensign, Bomba, Sir Bevy, Lustre, Comet, Seagull, Mrs. Eric Hambro, Mrs. C. Sharpin, Germania, Mrs. Prinsep, and Benbow. The second honours fell to Mr. A. W. Jones, Stetchford, with fine examples of Agnes Sorrell, Much the Miller, Sir Bevy, Dudley Stuart, Mrs. Eric Hambro, Fredegonde, Britannia, Sultan, Benbow, Comet, Nubian, and Germania; whilst the rest of the prizes fell to Messrs. C. F. Thurstan, Wolverhampton; Thomson and Co., Birmingham; Mr. Martin R. Smith, Hayes; Mr. A. R. Brown, Handsworth; and Mr. Robert Sydenham, as in the order named.

For six selfs Mr. W. H. Parton, King's Heath, won with a charming set comprising Barras, Almoner, Nubian, and others; a good second being the Rev. C. A. Gottwaltz, Hadzor Presbytery, Droitwich, with John Pope, Richard Dean, Glowworm, and Lady Hermione. The remaining prizes fell to Messrs. W. H. Twist, Albert Chatwin, Edgbaston; Herbert Smith, King's Heath; G. F. Spittle, Solihull; S. Gibbs, Birmingham; and J. Fairlie, Aston, respectively as named.

For twelve yellow ground Picotees, dissimilar, there were seven contestants, the lead being taken by Mr. Martin R. Smith with fine examples of Franklyn, Countess of Darnley, Daughter of Heth, Lady Avebury, Coquette, Aphrodite, Countess of Verulam, Badoura, Morgiana, Isolt, Mrs. Walter Heriot, and Diana. The second prize was adjudicated to Mr. A. W. Jones with a very close lot; and the other winners were respectively Messrs. A. R. Brown, R. C. Cartwright, C. F. Thurstan, Thomson and Co., and R. Sydenham. For six blooms Mr. W. H. Parton led with Gronow, Hesperia, Mohican, Alcious, Lady S. L. Oswald, and Gertrude; the second prize to Mr. A. Chatwin; and third, Mr. W. H. Twist, of Yardley. There were fourteen exhibitors in this class.

Keenly contested was the class for twelve Fancy Carnations, the pioneer being the Stetchford grower, Mr. A. W. Jones, with a magnificent box of Voltaire, Queen Bess, Argosy, Oakley, Alexandra, The Gift, John Sebright, Charles Martel, Eldorado, Brodick, Achilles, and Oberon. Second, Mr. R. C. Cartwright, with fine blooms, and Mr. Martin R. Smith third. In the class for six Fancies there was a strong "tug-of-war;" but the first prize went to Mr. W. H. Parton; second, Mr. W. H. Twist; the successful reservists being Messrs. J. Fairlie, the Rev. C. D. Gottwaltz, W. D. Rotch, Albert Chatwin, E. Charington, and W. Walker, in a complement of sixteen contestants.

In the class for twelve white ground Picotees there were six exhibits. The leader, Mr. F. W. Goodfellow, had beautiful examples of Amy Robsart, Lady Louisa, Miriam, Little Phil, Mrs. Gorton, Brunette, Mrs. Openshaw, Thomas William, Fortrose, Mrs. A. Brown, Harry Kenyon, and Pride of Leyton.

For six white ground Picotees eleven competed, Mr. D. Walker taking the lead with superb examples. A good second was Mr. E. C. Rossiter, Langley Green, with Thomas William, Brunette, Favourite, Fanny Tett, Little Phil, and W. H. Johnson. Excellent boxes were also staged by Messrs. Gottwaltz; J. J. Keene, Southampton; J. D. Williams, H. Boys, Walsall; S. Gibbs, and C. Chatwin.

In the class for twelve flake or bizarre Carnations there was a spirited contest, and Mr. C. R. Herbert (Messrs. Thomson and Co.'s grower) was to the fore with grand examples of Geo. Melville, Master Fred, Gordon Lewis, Geo. Rudd, Robert Houlgrave, Wm. Skirving, Guardsman, Robert Lord, Meteor, Sportsman, Mrs. Rowan, and George. The second position was accorded Messrs. Pemberton and Son, and the other successful contestants were C. F. Thurstan, A. R. Brown, J. Butt.

For six flakes or bizarres, there were nine entries, first honours falling to Mr. F. W. Goodfellow with a bright lot of blooms, the second prize going to Mr. D. Walker, and the remaining successful exhibitors in this class were Messrs. E. C. Rossiter, Wilson, Charles Chatwin, S. Gibbs, and E. J. Wootton, of Winchester.

Formidable was the competition in the classes for single blooms, there being twenty-two classes, with five prizes offered in each class. The society gave a silver medal to the most successful exhibitor in this section. For scarlet bizarres, the first prize went over the Border to the "Land o' Cakes," by that zealous "Carnationist," Mr. D. Walker, with a superb bloom of Robert Houlgrave; second, Messrs. Thomson and Co., with the same variety; third, Messrs. Pemberton and Son, also with the same. For a crimson bizarre, Messrs. Thomson took the lead with a superb Master Fred; also second prize with the same variety; third, Mr. D. Walker, with that standard old variety, J. S. Hedderley.

In the class for pink and purple bizarres Messrs. Thomson were again to the fore with George Rudd; second, Messrs. Pemberton, with the same; and the third to Messrs. Thomson with Wm. Skirving.

For a scarlet flake Mr. D. Walker led with Meteor, and was also second with Mrs. May; third, Messrs. Thomson and Co., with Meteor. For a rose flake Messrs. Thomson won the first prize with the invincible old Sportsman; whilst Messrs. Pemberton and Mr. F. W. Goodfellow won with the same variety.

In the class for a purple flake Messrs. Thomson annexed the first and second prizes with perfect flowers of Gordon Lewis; third, Mr. C. F. Thurstan, with the same variety. In the classes for single flowers of Picotees and Fancies, the heavy red edge section was strong, Brunette being represented in the first five exhibits. Here Messrs. Thomson were again to the front; second, Mr. E. C. Rossiter; and third, Mr. C. F. Thurstan.

For a heavy purple edge Mr. F. W. Goodfellow was to the fore with Mrs. Openshaw; second, Mr. D. Walker with the same variety; and Messrs. Thomson were third with Amy Robsart.

In the class for a light purple edge Messrs. Thomson were forward with a bloom of Pride of Leyton; also second with the same variety; and Mr. C. F. Thurstan third with a good bloom of Lavinia. For a heavy rose edge Messrs. Pemberton carried off the two leading prizes with Mrs. Payne; and Mr. F. W. Goodfellow had Little Phil for the third position.

For a heavy scarlet edge Mr. C. F. Thurstan was forward with Mrs. Sharp, securing the first and second prizes; and the Rev. C. A. Gottwaltz third with W. H. Johnston.

For a light rose or scarlet edge Messrs. Thomson and Co., Mr. D. Walker, and Mr. E. C. Rossiter respectively won with Fortrose. For a yellow ground Picotee Mr. Martin R. Smith secured first with a bloom of Mr. Walter Heriot; second, Messrs. Thomson and Co. with Mrs. Durant; and third, Mr. Martin Smith, also with Mr. Walter Heriot.

For a yellow ground Picotee, medium or heavy edge, Mr. J. J. Keen won with Gertrude; second, Mr. H. Boys with the same variety. For a yellow ground Fancy Mr. A. W. Jones scored with a fine example of Charles Martel; second, Mr. J. Fairlie with Brodick. For a Fancy Carnation, other than a yellow ground, Mr. J. Fairlie won with Dalgetty and Delightful in the first and second positions, and Muleteer was shown third.

In the class for single blooms (selfs) for a white or blush the first prize was awarded to Mr. Cartwright for a fine bloom of Ensign; and Mr. C. F. Thurstan the second and third prizes with Mrs. Eric Hambro.

For a yellow variety Mr. D. Walker won with Seymour Corcoran; second, Mr. Martin Smith with Goliath; and Mr. R. C. Cartwright third with Germania.

In the buff or terra cotta class Mr. Cartwright won with Mrs. R. C. Cartwright right off; he was also second with Benbow. A fine bloom of Edna, in the scarlet section, won the first prize for Mr. W. D. Rotch; second, Mr. Parton with Isinglass.

PREMIER BLOOMS.—These were represented by some exquisite specimens. Messrs. Thomson and Co. with Gordon Lewis (P.F.), Mr. F. W. Goodfellow with Lady Louisa, Messrs. Thomson and Co. with Pride of Leyton, Mr. A. W. Jones with John Sebright, and Mr. W. H. Parton with Gertrude.

Undressed and border Carnations and Picotees were unusually well shown. Bouquets and table decorations also formed a pleasing feature. In the former class Mr. W. B. Latham secured the first prize with a tasteful arrangement of pink coloured Carnations, and Mr. S. Gibbs stood second. The table stands of epergnes and vases were principally composed of Sweet

Peas, which materially contributed to the enhancement of this fine exhibition.

Silver-gilt medals were awarded to Messrs. Hewitt and Co., Solihull, for a grand display of hardy herbaceous flowers, which included several novelties; also half a dozen shower bouquets. To Messrs. B. D. Davis and Son, Yeovil, Somerset, for a fine collection of Begonias; and to Messrs. Felton and Son, Hanover Square, London, for their unique display of Carnations.

Large silver medals were awarded to Messrs. Dicksons, Ltd., Chester, for a collection of hardy herbaceous flowers; to Mr. J. H. White, Worcester, for a rich and large arrangement of hardy herbaceous and other garden flowers; and to Mr. Vincent Slade, Taunton, for a very fine display of cut Zonal Pelargoniums.

Small silver medals went to Messrs. Cutbush and Son for a collection of decorative Carnations; to Mr. William Sydenham for a large collection of Violas in exquisite delicacy of colouration; to Messrs. Pattison, of Shrewsbury, for an excellent display of Violas; and to Messrs. Simpson and Sons for an attractive display of the leading varieties of Sweet Peas.—W. G.

Cornwall and Devon Shows.

ST. STEPHEN'S-IN-BRANWELL, CORNWALL.

A most successful show was held on August 5. There were 235 entries, sixty over last year. The quality was good, and called forth praise from the judges. Prizes were given for the best stocked and best kept gardens and allotments, and Mr. Hott said that, in all his thirty-five years' experience as judge, he had never seen a better garden than that which had won the first prize. This confession of the instructor in horticulture for Cornwall County Council is worth recording. Mr. I. J. Buscombe was the winner. For a collection of vegetables C. Parsons, St. Columb, led; second, J. Olver, St. Stephen's; third, J. Osborne. Collection of Raspberries, Currants and Gooseberries, first, J. Olver. Bunch of Grapes, first, J. Magor. Three early Cabbages, first, Mrs. Bennetts; second, W. H. Glenmow; third, W. Tregunna. Collection of Potatoes, four named sorts, six of each sort, first, J. Olver; second, M. Yelland; third, E. Robins. Collection of cut flowers, first, C. Parsons. Collection of vegetables, confined to farmers of the parish, first, J. Olver. There were some fine honey exhibits. Best swarm of bees (special prize, hive, value 15s., given by Cornwall Bee-keepers' Association), T. Richards, St. Stephen's. About 700 paid for admission.

HALBERTON, DEVON, AUGUST 6.

The thirty-first exhibition of fruits, flowers, and vegetables was held recently. This parish is one of the best in Devonshire, rich deep soil prevailing, and Halberton is near Tiverton. Under the care of Prebendary Gregory and his wife the parsonage garden is one of the loveliest in Devon, and it is well worth a visit from people who are in the neighbourhood.

PORT ISAAC, CORNWALL.

The show was a great success, and nearly forty more exhibits were on the tables over the number of last year. The interest centres in the great improvement in cottage gardens. Flowers and flowering plants were not equal to last year's staging. The best was past, the show for flowers being a little late. I think that the idea of the committee was good, namely, a later show, in order to have better vegetables, which is educational. The judges were Mr. H. Osborne, of Wadebridge, and Rev. W. Townsend, of Delabole. Mr. Bennett and Dr. George, hon. secretaries, worked hard, and they, with the committee, must have been very gratified at the large patronage accorded. Dr. George said that the farmers had not responded except in two or three cases, but he hoped that another year the present praiseworthy example of the cottagers would have a salutary effect. Mrs. Conor, of Doiden Castle, distributed the prizes. Chief prizetakers were Messrs. S. Doidge, A. Mitchell, G. Bennett, Mrs. Hawke, and Miss Hyde. Dinner table decoration, F. Shannon, Miss Udy, &c.—X.

British Pteridological.

The annual meeting of this society was held in the Institute, Bowness, on Monday August 3. There were present Dr. Stansfield (president) and a fair number of other members, both local and general. The minutes of the previous annual meeting were read and confirmed, and the secretary's and treasurer's reports showed the financial affairs of the society to be in a sound condition. The president, in his opening address, made reference to the gaps which had been caused by death in the ranks of the society since he last met the members, and expressed his pleasure at meeting many old and some new friends. He congratulated the society on the publication of the book of British Ferns, which had been compiled by members of the society, under the editorship of the late president, Mr. C. T. Druery, F.L.S., V.M.H., containing up-to-date lists, with details and dates of origin, of all

the best varieties of the various British species of Ferns. He urged the members to keep a watchful eye upon the book, so that in any future edition any possible flaws might be corrected, and new matter bearing upon the subject be inserted, so that the book might continue to be the standard work of reference upon the subject. Several of the chapters on apospory, &c., by Mr. Druery and others had never before been published in popular form, and would constitute a feature of great biological interest in the book.

The election of officers for the ensuing year was then gone through, most of the old officers being re-elected, but with some changes among the vice-presidents and committee. The place of meeting for next year was again fixed at Bowness, this being fairly central for members from England, Ireland, and Scotland, as well as being an attractive place of meeting from its natural advantages and surroundings. Two papers by Mr. C. T. Druery, F.L.S., were read, in the absence of the writer, by the president, their subject being "Varietal Types of British Ferns" and "The Propagation of Varieties of *Lastrea montana*." The president also read a paper of his own upon "The Study of the Abnormal." All three papers were received with applause and were evidently highly appreciated. A short discussion followed, in which Mr.



Sarracenia × *Stevensi*. (See page 150.)

Garnett, Mr. Phillips, Mr. Whiteside, Mr. Edwards, and others took part.

Mr. Garnett expressed his strong belief in the influence of environment in the production of varieties, and it was pointed out that there was a strong case in point in a beautiful crested form of Lady Fern which had been picked up last year in this neighbourhood by Mr. Phillips as a slightly abnormal but not crested form; during the year, however, that it had been under cultivation it had developed into a very fine crested or cristata form. The plant was exhibited by Mr. Phillips.

Mr. Garnett exhibited a very promising plumose setigerum form of *Athyrium*, but the Fern was not yet mature, and it was thought desirable to defer naming it for another year. Mr. J. Loveday exhibited some very finely grown crested forms of *A. f.-f. setigerum*; Mr. Henry Bolton, Mr. Loveday, Mr. Prager, and others exhibited fronds, all of more or less interest and importance. The sensation of the year, however, was a magnificent thoroughbred grandiceps form of *Lastrea montana*, which had been found within a few days in Longsleddale by Mr. Smithies. The certificate of merit of the society was awarded to this Fern under the name of *Lastrea montana grandiceps Smithies*. It is singular that Mr. Smithies is the only previous finder of a grandiceps form of *montana*. The present find, however, quite surpasses previous records of this type in this species, and is equal to the best grandiceps forms found in other species. The meeting concluded with votes of thanks to the writers of the papers, which, it was decided, should be published in the transactions of the society.

Royal Scottish Arboricultural.

A meeting of the Royal Scottish Arboricultural Society was held in the Dumfries Showyard recently. The Earl of Mansfield, who presided, remarked that the Forestry Exhibition was very good, so far as it went, but expressed disappointment that it was not on a larger scale. Captain Walker, of Crawfordtown, took exception to the manner in which the exhibits were classified, and complained that of the four varieties of Pine for which prizes were offered, three—the Corsican, the Menzies Spruce, and the Douglas Spruce—were of recent introduction into this country. The Fir exhibits, he submitted, should be confined to trees which were of common growth in this country. Mr. Hay, Kilmarnock, remarked on the incongruity of grouping farm carts and field gates in one class, and said they ought to have separate classes for exhibits of distinct character. Mr. Robert Galloway, S.S.C., secretary, said the committee might remodel the premium schedules and classification of exhibits before another show. The proceedings terminated with a vote of thanks to the chairman.

The usual excursion general meeting of the society was held on Monday forenoon in Dowell's Rooms, Edinburgh. Mr. W. Steuart Fotheringham, of Murthly, presided over a good attendance of members, which included Lord Mansfield and Mr. Munro-Ferguson, of Novar, M.P.

Scottish Horticultural.

The monthly meeting of this association was held in Dowell's Rooms, Edinburgh, on Tuesday evening, the 4th inst. Mr. McHattie presided over a good attendance of members. Mr. Bird, gardener, Raehills, Lockerbie, delivered a very eloquent and pithy little lecture, entitled "Twenty Minutes with Young Gardeners." Mr. Bird, in a pointed and lively fashion, addressed "the apprentice," "the journeyman," and "the foreman" in turn, showing the way they should each walk in their several spheres, and what they should all aim at if they hoped to be successful in after life. His advices were such as have often been given before, but not often in such an enticing garb—industry, study, good character, obligingness, and amiability. "When found take a note of" should be a maxim with every young gardener. "Keep your eyes open." "Don't be too anxious to work under glass," and strongly urged them to remember there was much more demand for the all round man than for the specialist.

Mr. Bird was listened to with rapt attention, and his lecture was received with great enthusiasm. An interesting discussion followed, taken part in, among others, by Mr. Comfort, Mr. Anderson, Mr. Smale, Mr. Todd, and the chairman. Mr. Todd warmly urged young gardeners to give more heed to the intellectual side of a gardener's equipment, pointing out that in these days, when there were so many openings for gardeners in connection with commercial horticulture, and through the increase of public gardens and parks in large towns and cities, it was necessary that the gardener should not only be a good cultivator, but a highly intelligent, cultured gentleman. A very hearty vote of thanks was awarded to the lecturer.

There were many interesting and beautiful exhibits on the table, from Messrs. Dickson and Co., Messrs. Grieve and Sons, Messrs. Todd and Co., Mr. John Downie, and others. A certificate of merit was awarded to *Dracaena Kewensis* shown by Messrs. Dickson as a mark of its highly useful qualities as a

decorative plant. A certificate was also awarded to Mr. Downie for a seedling Fancy Pansy (to be named). Mr. McHattie was warmly thanked for presiding.

Lincolnshire Gardeners.'

On Wednesday evening, August 5, the members of the Lincolnshire Gardeners' Association turned out in good numbers in response to the kind invitation of Messrs. Pennell and Sons, to inspect their various trials of Sweet Peas, culinary Peas, &c., at their Bracebridge Nurseries. Arrived at the tramcar terminus, the firm had conveyances in readiness to drive the party to the nurseries. Both members of the firm were there to personally conduct the members round, and at once a move was made to the Sweet Peas, which were looking grand. Included in these were rows of all the newest varieties, and note-books and pencils were soon in requisition. Messrs. Pennell and staff were besieged with questions, which they readily answered. It would be difficult to find a collection in this part of the country to compare with this one, of this most popular flower.

It was not possible to have more than a glance at the choice collection of Roses, the multitude of fruit trees, shrubs, &c., which are so successfully grown here, and remarks were heard on all sides about the excellent condition in which this large nursery is kept, reflecting the greatest credit on the firm and staff alike. Refreshments were very generously provided by the firm, and after partaking of these, conveyances were again chartered and the party driven to the trial ground of the culinary Pea. The varieties here were simply bewildering. Old favourites could be seen as well as the latest novelties, and Messrs. Pennell and Sons are to be congratulated on winning such a reputation for this delicious vegetable. Mr. Wipf, in an interesting speech, moved that the best thanks of the members present be given to Messrs. Pennell for the kindness extended to the association, which was ably seconded by Mr. Kingan, supported by Mr. Bugg, and carried with enthusiasm. Mr. C. W. Pennell replied in a few well-chosen remarks, and hoped to see the members down at Bracebridge on similar occasions annually, which remark was greatly cheered. Conveyances were then entered, and the party driven to the tram terminus again, all being highly delighted with their most enjoyable and instructive visit.—OLD READER.

Obituary.

Mr. Frederick Alex. Gardiner.

We regret to record the death, after a long and painful illness, of Mr. F. A. Gardiner, a noted Orchid grower and gardener in his day, who spent many years in the U.S.A., but latterly lived in Surrey, England. He was a brother to Mr. W. Gardiner, our Birmingham representative.

Mr. John S. Hedderley.

This fine old Midland florist, widely known in Nottinghamshire and Derbyshire, has recently died at his home, Sneinton, Notts, at an advanced age. He was one of a band of florists who made floriculture highly popular in the Midlands fifty years ago, having as his contemporaries E. S. Dodwell, Henry Steward, John Bayley, J. T. Wood, John Holland, John Hepworth, W. M. Hewitt, and many others, who grew and exhibited Carnations in particular, when many villages had their annual exhibition. An amateur, he was a constant worker in his leisure from business, and he was a contributor to some of the floral publications of that period, and especially to the "Midland Florist and Gossip of the Garden." He was a warm supporter of the late Mr. E. S. Dodwell, and made a point of being present at the exhibitions of the Oxford Carnation Union, held in that city.

His name will be recorded for years to come by the fine and striking scarlet flake Carnation Sportsman, which sported in his garden from S. B. Admiral Curzon in 1855. The year following it took all the four leading prizes at the annual exhibition of the National Carnation and Picotee Society at Birmingham in the scarlet flake class, and it went at once to the top of the list as the best scarlet flake. At the recent exhibition of the National Carnation Society at the Drill Hall, on April 21, it took the first prizes in the scarlet flake class; while at the Midland Carnation Society's show at Birmingham on the 6th inst. it repeated its success of 1856 by taking, as it did forty-seven years previously, all four of the leading prizes in the scarlet flake class.

Mr. Hedderley also raised a charming rose self, named Royalty, which is now much grown for decorative purposes on long stems. His old friend, Mr. Dodwell, named a crimson bizarre J. S. Hedderley, and it is one of the most popular of the section, and is found in nearly all the leading stands at Carnation shows. Mr. Hedderley was an all-round florist, and grew Roses, &c., with excellent results.—R. D.

Spot on Sweet Pea Plants.

Recently specimens of diseased Sweet Pea plants reached me through the Editor of the *Journal of Horticulture*, the plants being a complete failure, some of the seeds rotting in the ground, others of the young plants collapsing when only a few inches high, one shown in the figure at *A*, and others again flowering very indifferently, the foliage withering (part of such plant shown at *C*), and the flowers puny and spotted in the petals. On investigation the plants were found quite healthy at the roots, there not being any evidence of eelworm, and there were few nitrogenic nodosities (*c*), only a little cankerous affection on the root-stem of the plant *A* at *d*, and this not sufficient to account for the leafless condition of the young plant. The leaflet (*g*) had several pale spots, much more so than the rest of the sere and dry tissue, and there were a few pallid and dry spots on the stem (*f*), otherwise not any traces of disease, no "fruits" being discoverable in the tissues of the leaf spots, or in those of the stem, though a few very minute dark dots were observable in a spot on the stem when examined by a pocket lens, shown in *B* at *h*.

The older plants, a portion of one at flowering age shown in *C*, had the leaves very sickly looking, and with many pale spots (*ml*) on the whole, from the base upward. An affected leaf from the flowering part of the plant is shown at *D*, the spots being very pale, almost white, and the leaf tissue yellowish and sickly-looking. The spots appear on green, healthy leaflet (*E t*), and the remainder of the leaflet (*u*) soon assumes a yellowish hue, quickly becomes sere and withering, and not any "fruits" of the fungus were discernible in the diseased spots, these drying up and falling out. On the older leaves that had retained a certain amount of freshness, some of the spots contained minute blackish specks, shown in *F* at *v*, and a section examined under a low power of the microscope showed these to be perithecia, or conceptacles of the fungus, two immature and embedded in the diseased leaf tissue, *G* at *w*, and one mature perithecium (*x*) discharging spores. The spores are shown at *H*, and are referable to Pea spot (*Ascochyta pisi*).

According to Masee's "Text Book of Plant Diseases," Pea spot is "sometimes injurious to cultivated Peas (*Pisum sativum*), Haricot Beans (*Phaseolus vulgaris*), and species of *Vicia* and *Cercis*." It is also sometimes very prevalent on Everlasting Peas (*Lathyrus sylvestris platyphyllus*, syn. *L. latifolius*), completely withering up large portions of the leaves; but in these there seldom are any "fruits," and the same occurs in the bolder and fulsome leafage of Sweet Peas (*L. odoratus*). But though not uncommon on the leaves and stems, and even pods, the disease is seldom so

disastrous as to ruin the plants, as appears in this instance; but there is no accounting for diseases passing from relatively passive to a malignant epidemic.

The sender of the specimens had the same occur last year, and on newly broken up ground, so that there could not anything be attributed to disease from a prior crop. But the sward may have contained plants of *Vicia*, particularly of the Meadow Vetchling (*Lathyrus pratensis*), and the spores of the fungus present that infected the Sweet Pea plants. On the other hand, the burying down of the sward would be calculated to render infection less liable, and though some seed rotted in the ground, there is no evidence that the disease is carried over in the seed; yet as the fungus attacks the pods, it is not unlikely that seeds of the stunted and deformed examples may also be affected. It is possible for the disease plasma to pass over in the seed, and the disease to break out in spots on the leaves of the young plants. But on this point we have no data, or even on that of the disease being communicated to cultivated plants from diseased wildling *Lathyrus* or *Vicia*, though this is the most probable source of infection. Even what the resting stage of the fungus is has not been satisfactorily determined, its present form being probably a stage of a higher. It produces small pale spots on the leaves, stems, and pods, which become dry and brittle, and in the case of leaves eventually dropping out, giving to the leaf the appearance of having been riddled with small shot, and tiny perithecia are formed on the diseased portions. The effect is to greatly weaken, and in bad cases cause the ruin of the plants. That is about all that is at present known of *Ascochyta pisi*.

In the matter of prevention, not any means are recorded. It is likely that spraying with potassium sulphide solution, 1oz to 2½ gallons of water, would be useful, the sulphide being first dissolved in about a quart of hot water, and when dissolved adding 2½ gallons of soft water, in which 1oz of soft soap has been meanwhile dissolved. Well stirred, the solution, being cool enough, is ready for use. Spraying should commence as soon as the plants are well above the ground, repeating at intervals of ten days or a fortnight, so as to coat the foliage as made with the finest possible film of the solution, continuing up to the flowering stage.

Diseased portions should be burned, even the haulm of old plants, as it is likely the resting stage is in the dead plants, and the spores discharged from perithecia that form in the diseased portions, and in the spring and early summer infect any suitable hosts they may alight upon.

As the ground was new in the particular instance referred to, it is likely that a dressing of lime would have been useful, or, perhaps better, a dressing of basic cinder phosphate, 14lb per rod, along with 3½lb per rod of kainit, dug in and left until near



Sweet Pea plants affected with Pea spot, *Ascochyta pisi*.

A, diseased young plant, two-thirds natural size: *a*, radicle or tap-root sound; *b*, side roots and fibrolets clean; *c*, nitrogenic nodosities; *d*, small cankerous specks on root-stem; *e*, collar of plant or ground level; *f*, pale (disease) spots on stem; *g*, only leaflet on plant, quite sere, and with tissue dropped out of disease spots.

B, portion of stem of plant *A*, enlarged two diameters: *h*, diseased spot that has partly girdled stem; *i*, sound tissue.

C, root and portion of top of a plant arrived at flowering stage, two-thirds natural size: *j*, roots quite clean; *k*, nitrogenic nodosities; *l*, root-stem sound; *m*, stem above ground not spotted; *ml*, leaves diseased (with spots as shown).

D, leaf from upper part of plant, two-thirds natural size: *n*, stipules; *o*, petiole; *p*, leaflets; *q*, tendrils; *r*, disease spots; *s*, pale yellowish green leaf tissue.

E, leaflet in early but decisive stage of disease, natural size: *t*, pale spots; *u*, apparently sound but sickly-looking portion of leaflet, the whole ultimately withering.

F, small leaflet from lower part of plant *C* seen from under side, natural size: *v*, disease spots slightly raised at circumference, and showing minute dark dots in tissue—the fruits (perithecia) of fungus.

G, section through portion of a diseased spot, *F*, *v*: *w*, immature conceptacles or perithecia of fungus; *x*, mature perithecium discharging spores, $\times 50$.

H, conidia (spores) of fungus, *Ascochyta pisi*, $\times 200$.

cropping time, then forking over. Food for the Peas would thus be supplied of a nature in which turfy soil is generally deficient, and thus the plants be fortified against the disease, or better able to resist its onslaught.—G. ABBEY.

Gadding and Gathering.

The Banner of Horticulture.

These passing years mark the opening period of a great horticultural expansion, an era when gardening schools and craft education and practice are being enormously developed. Cultures are becoming intensive and scientific, and from now, if never before, horticulture will date more and more as an industry, as vitally important as agriculture, from which it is, in its larger commercial aspects, divided by mere arbitrary definitions.

The "lesser horticulture" (to coin a phrase) comprises (1) all aspects of ornamental and decorative gardening; and (2) plant, fruit and vegetable cultures within the range of ordinary private household requirements. The ornamental and decorative phases of horticulture are varied and complex. They embrace landscape gardening (an art, the practice of which entails changes in the appearance of a whole landscape or district); the designing and upkeep of private and public grounds and parks, and the adornment of our persons, our apartments, our dining tables, our churches, theatres, and halls, and even the beloved dead, ere we commit them to the silent grave, we wreath with choice flowers of the garden. Such is the reach of the ornamental and decorative side of gardening.

The smaller cultures of fruits, flowers, and vegetables demand experience and wisdom on the part of those who endeavour toward the highest proficiency; but the responsibilities in the "greater horticulture," seem to us to be far keener, and fraught with consequences of more serious moment. The "greater horticulture" pertains to the successful, practical management of the extensive nursery gardens of our own and other lands, allying the bulb grounds of Holland, Japan, Bermuda, Scilly, Ireland, and the Cape; and again, the magnificent orchards of every civilised country. The vast importance of the great flower and vegetable growing centres has never been fully appreciated by us, for they have grown up in ratio to the increase of growth of towns and cities, and we have never contemplated what it would mean to be without them.

For our beef, and bread, ale and spirits, we are dependent on agriculture; for fruits, and vegetables, and for the floral and plant adornments of our social life, we depend on horticulture. Nor would our cities be habitable without their parks and boulevards. It is, then, an honour, a joy, and a recompense to be a gardener, a member, however humble, of the huge army of toilers and tillers who can claim allegiance to the banner of Horticulture, either in its "lesser," or "greater," applications.

Gardening in New Zealand.

At the meeting of the Royal Horticultural Society on July 21, Mr. Geo. Hunt read a paper on this subject. In his remarks he named the Zonal Pelargonium, and stated that the original varieties taken out by early settlers had now become so naturalised as to grow wild, forming hedges in the North Island. All English flowers blossom profusely in Auckland.

Wine making has become an industry, and within a recent year 800 gallons had been made in one season at Auckland. This was estimated to be worth 5s. per gallon in the cellar, being two-thirds of the cost of the first vintage. It is hoped that the New Zealand Government will come forward and help the settlers.

The culture of *Phormium tenax* for its fibres, has been much developed. The plant deteriorates in the southern districts of the South Island, but does well in Auckland. The leaves are cut from the plant; they are macerated in water to rid them of the green cellular parts, and are then dried in the fields, after which they are shipped to England as hemp, to be manufactured.

The New Zealand climate is capable of producing the best fruits, but insect pests are very destructive in some plantations. Cider is a favourite drink amongst the farmers, though harvesters prefer tea, which they drink throughout the day. Strawberries can be profitably grown, and Raspberries are successfully cultivated in Nelson Province, in the northern part of South Island. Here one may see as much as twenty-five acres of one variety—the Red Antwerp—but American sorts are not in favour. The trade is done chiefly with Wellington, and small towns on the west coast; and jam factories have been established for preserving the fruits. So much as 5d. per pound is got at ordinary times, but in times of glut the price for Raspberries only realises 1d. per pound.

The rich, deep, loamy nature of the Canterbury Plain was mentioned, and it was observed that the finest varieties of Apples are grown here, and are so plentiful at times as to be allowed to rot beneath the trees. Mr. Hunt's paper was written on the voyage home from New Zealand, and it will be of much interest either to students of geography in its many-sidedness, or to intending immigrants to the "Britain of the Southern Seas."

He named a large number of plants and shrubs, describing the merits and uses, amongst them being the Allspice of commerce, and other species of Myrtles; also Pittosporums, Lime trees, Magnolias, besides Violas, Ranunculuses, Oxalis, and other subjects.—WANDERING WILLIE.

THE BEE-KEEPER.

Finding and Introducing Queens

One of the most perplexing problems to the novice is where to find the queen. In modern bee-keeping this operation has very often to be performed. The finding of one bee among so many is apparently very formidable; but, as a rule, if the hive is opened with as little disturbance as possible, and care taken not to alarm the bees, the queen will be found on one of the central brood combs, generally one of those where brood is just hatching. If she is not on the centre comb take out another, and so on until the whole of the bars have been examined. The fact that her body is longer and of a brighter colour, and that her legs are of a reddish brown tint, clearly marks out her royalty. If unable to find her the first time a second examination should be carefully made. She is, however, often found the first time, unless she is a black queen, which, being easily frightened, run into dark corners. There is little difficulty in finding Italian queens, as they are not disposed to hide, and their bright colours make them conspicuous. If a colony is in possession of a virgin queen it will show no signs of queenlessness, and there is an increased difficulty in finding her, as her abdomen is considerably smaller. In some cases, notably emergency queens, there is little or no difference between the virgin queen and a worker.

If doubtful or unable to find whether there is a queen in a hive or not, a ready method of ascertaining definitely is to place a frame of unsealed brood in the centre of the brood nest; and if queen cells are built thereon it is almost certain that there is no queen in the hive. The absence of eggs is not sufficient evidence that a colony is without a queen, and before treating it as a queenless colony or introducing another it is necessary to try the above unsealed brood test. Should the food in the hive be distributed without any sense of order it is a sign of queenlessness, or that there is an unfertile queen in possession, as immediately eggs are laid the honey will be moved and stored in the tops of the frames.

The principal factor in introducing queens is to know the exact condition of the colony. Caution is always necessary, especially if the queen is a valuable one. Where there are plenty of young bees the risk of introduction is minimised, as they take more readily to the strange queen. A stock of bees is in the best condition for receiving a stranger when it has been queenless from eighteen to twenty-four hours, or sufficiently long to know that they are queenless, and yet not sufficiently long to have started queen cells. Queens liberated from introduction cages by the candy eating method will, if placed over such a colony, be all right. When, however, queen cells are well advanced before the queen can be placed above, they should be excised, after which the queen may be placed over the cluster in her cage and liberated after the forty-eight hours. The hive should not be opened until two or more days have elapsed, and then care taken to see that the queen has left the cage. If not, replace it and close the hive for two days longer.

The chief difficulty in this branch of bee culture is brought about by the fact that queens are often required for re-queening queenless stocks, the bees of which are more or less old ones before their condition is discovered. In such a case, if the queen is caged over the cluster for a few days, until they are seen to hang loosely on it, and merely pass their tongues through the perforations to feed the queen, she may be liberated with safety. If a hive has been queenless for a long time always put a bar of young brood from another hive into it before attempting to introduce the queen; and if they start queen cells it will be proof that there is no fertile worker.—E. E., Sandbach.

How to Commence Bee-keeping in Late Summer and Early Autumn.

I think it has been clearly established that it is profitable to keep bees, and there can be no doubt that there is much pleasure to be derived from the pursuit. The more one learns about these interesting creatures the more fascinated we become. Many of your readers, no doubt, would commence bee-keeping if they could do so cheaply, and only knew what to do. The skeppists will soon want to sell some honey or place it in some local show. Most of these people simply "keep bees," and are not bee-keepers. They will take the honey by destroying the bees over the sulphur pit. Make your own arrangements with these gentlemen, and generally they are

willing to give you the bees for the driving. This done, purchase a smoker, a very good one is the "Crane," a bar-frame hive, with "Weed" foundation (full sheets) securely fixed, and make quite sure they are *securely* fixed, and over these a quilt, with a feed hole about 3in in the centre.

How to Drive.—Place some brown unglazed paper in the smoker. I say paper because it is handiest usually, but rag, &c., or anything which will make a big smoke, will be equally suitable. When the contents of the smoker are well lighted, go to the hive to be taken, and puff a little smoke through the entrance; wait about two minutes. During the interval the bees are gorging themselves with honey, and will in consequence be easy to handle, for then they cannot, if they would, turn round the abdominal portion to the correct angle for stinging. Overturn the hive, and at once give a puff of smoke across the combs to drive down the bees. This warning is most important; omit it, and many stings may result; but if attended to, I will guarantee not a single sting will follow. Place the full skep mouth upward in an empty bucket. Over the hive to be driven place an empty skep, so that the rims of both coincide; hinge them together at the back, using a skewer, and fasten the sides up with the aid of driving irons. Stand with your back to the strong light and tap the sides of the full hive gently—gently, remember—with your hands or a piece of stick, and in about ten to twenty minutes the whole of the bees will be in the once empty skep. This operation is best performed about six in the evening. If you can possibly manage to get two or three lots to drive, so much the better; mix the lot together, and toss out in front of your hive.

FEEDING.—It will be necessary to feed them, and the more rapidly you can do it the greater will be the success you will achieve. They have cells to build, brood to raise, and to store sufficient food to carry them through until next May perhaps. Most of the failures among bees occur during the months of March, April, and May, when we have a stormy or wet spring.

How to Make Food.—Place about 10lb of white loaf sugar, with five pints of water, in a saucepan; stir well to prevent burning, and boil for a few minutes. Put this syrup, warm, in a glass jam pot—say 3lb—filling it more than full, and then tie down tightly with a piece of muslin and invert over the feed hole in the evening. Do not be led by bee-keeping friends to add chemicals which they know will prevent foul brood, for these will cause the bees to take down the syrup slowly, and no man knows of a case where foul brood, at any rate, has been cured by its aid. In order that the bees may be considered safe until the late spring they must have between 20lb and 30lb stored by the end of September at the latest.—HYBLA.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1903. August.										
Sunday ... 2	S.W.	deg. 63·7	deg. 58·3	deg. 71·2	deg. 58·0	Ins. 0·30	deg. 61·2	deg. 60·2	deg. 58·4	deg. 46·2
Monday ... 3	S.W.	63·5	62·1	71·2	56·3	—	62·0	60·3	58·4	56·2
Tuesday ... 4	S.W.	62·7	60·0	70·8	51·7	—	61·9	60·5	58·4	42·6
Wed'sday ... 5	W.S.W.	62·7	57·3	69·2	52·7	—	61·3	60·5	58·4	43·8
Thursday ... 6	W.N.W.	61·4	55·0	69·7	49·3	—	60·7	60·3	58·4	39·2
Friday ... 7	W.N.W.	63·2	57·7	72·2	42·8	—	60·7	60·3	58·4	34·2
Saturday ... 8	S.S.W.	69·5	60·0	78·2	46·8	—	62·0	60·7	53·4	40·2
MEANS ...		63·8	58·6	71·8	51·1	Total. 0·30	61·4	60·4	58·4	43·2

With the exception of a little rain on the 2nd inst., the weather during the week has been fine and bright.

Trade Catalogues Received.

Clibrans, 13, Stamford New Road, Altrincham.—*Dutch and other Bulbs.*
 Cooper, Taber, and Co., Ltd., 90 and 92, Southwark Street, London, S.E.—*Wholesale Bulb Catalogue.*
 Wm. Cutbush and Son, Highgate Nurseries, London, N.—*1, Carnations; 2, Dutch Bulbs; 3, Strawberries, Blackberries, &c.*
 Ant. Van Velsen and Co., Haarlem, Holland.—*Bulbs.*
 James Veitch and Sons, Ltd., Royal Exotic Nursery, Chelsea.—*Bulb Catalogue.*



Fruit Forcing.

VINES: EARLY HOUSES.—The Vines that have been forced to ripen the fruit in May and June have the wood ripe. Some of the leaves may also have fallen, which are generally on the wood first formed, as these from their texture are soonest exhausted in elaborative power. There are other causes for the leaves being shed early, such as attacks of red spider, insufficient supplies of water, scorching, and lack of nourishment. These must be guarded against, but under the best of treatment some of the lower leaves fall early from other causes than their thin texture, whilst the laterals, which are formed later, have stouter foliage. Such are useful in assimilating nutrient elements, some of which find their way to the leafless buds, as is seen in their plumping and in the thickening of the adjacent wood. The laterals must not therefore be cut close in, as that would probably cause the principal buds to start; but remove the growth by degrees, deferring the final pruning until growth has finished and the wood become ripe.

RENOVATING THE BORDER OF EARLY HOUSES.—When the Vines are weakly it is a good practice to remove the soil down to the roots and fork it out from amongst them, taking the opportunity of raising any that are deep, and laying them in fresh turfy loam nearer the surface. Good calcareous gravelly loam is the best, especially of a ferruginous nature, or one-sixth of lime rubbish may be added when lime and gritty matter is deficient and the soil is heavy. If the soil be very light and brashy, add a sixth of clay marl dried and pounded. A twelfth of wood ashes may be supplied with advantage, also a twenty-eighth part of basic cinder phosphate; and where the soil is poor a fifth part of fresh horse droppings. Other fertilisers are best applied as surface dressings. Give a moderate watering, when fresh roots will push, especially from near the collar, and be in capital condition to support a good start in the Vines when the time comes round. The border renovation, also lifting, should be performed whilst the leaves are on the Vines. If the weather is right the house will need shading and keeping rather close and moist for a few days. The work should be performed with dispatch, not operating until the wood is matured.

MIDSEASON HOUSES.—The Vines have had a fair amount of sunshine this season, though the weather has been remarkable for heavy falls of rain, which has not prejudicially affected outside borders where these are composed of sound open materials over thorough drainage; but in borders of close staple and rich materials the Grapes have shown an unusual tendency to shanking. On the whole the Vines have perfected or are ripening satisfactory crops. Where the Grapes are ripe air should be freely admitted, and enough afforded at night to insure a free circulation. If water is needed supply it early on fine mornings, as thus supplied, on days that promise to be fine, and with free ventilation, the moisture will not do any harm, but favour the keeping of the Grapes in sound condition. A slight shade is necessary to prevent the sun taking the colour out of Black Hamburgs and other black Grapes, especially when the foliage is thin. Grapes commencing to colour need a free circulation of air in the daytime, and enough at night to insure a change of atmosphere, a gentle warmth in the pipes often being necessary when the weather is cold or damp, both day and night. This is particularly necessary for Muscat of Alexandria and other thin skinned Grapes liable to "spot," a night temperature of 65deg being secured, and that of the day 70deg to 75deg by artificial means. Copious supplies of water and occasional applications of liquid manure will be needed until the Grapes are well advanced in colouring, and then the inside border may be mulched with short, dry, spent material.

LATE HOUSES.—Full supplies of water and feeding at the surface are necessary until the Grapes are coloured up to the footstalk, for many late Grapes appear ripe when they are only partially finished. All late Grapes require time and good support up to the finish. It certainly saves the Vines from undue strain, nourishes them in the growing time, and fortifies them in the wood and buds by the matter stored for the coming season's crop. The Grapes ought now to be colouring or advanced in that process, then, with a circulation of warm, rather dry, air constantly, and a thoroughly moist condition of the soil containing full supplies of available nutrition, they will swell and finish well. The chief cause of Muscat of Alexandria berries shrivelling, even before they are ripe, is poverty; also of others shrinking after they have hung some time. Afford a temperature of 70deg to 75deg by day artificially, 80deg to 90deg with sun, and

close sufficiently early to increase to 90deg or 95deg. When the sun is losing power afford enough air to insure a circulation, and allow the temperature to gradually cool, which prevents the moisture in the atmosphere depositing on the berries. The hot water pipes should, if necessary, have a little warmth in them to prevent the night temperature falling below 65deg, and this with a "crack" of air. Increasing this by, or before, the sun shines powerfully on the house, especially after a period of dull weather, may save the Grapes from "spot"; indeed, this is more due to defective ventilation than to fungoid infection, the spores not being able to germinate under well aerified conditions. Therefore we advise that particular attention be given to the ventilation of the house.—ST. ALBANS.

Kitchen Garden.

WINTER SPINACH.—A liberal sowing for the main crop should be made between this date and the 20th of the month. Very rich ground is not essential, but it should be in good heart. Ground on which Potatoes have been grown is suitable. Fork over the surface and work in some wood ashes and a sprinkling of soot. The seed may be sown in drills drawn an inch deep and 15in apart. Either the round or the prickly-seeded Spinach will answer. In the event of the soil being very dry at the time of sowing, the drills may be moistened with water.

CAULIFLOWERS.—The present is a convenient time to make a sowing outdoors to secure plants for standing the winter and planting early in spring. Some of the seedlings when large enough may be pricked out to strengthen on a sheltered border, or in a frame, which can be afforded rough protection, as the plants must remain in such quarters or stand thinly on the seed-bed for the winter. Sow the seed on fairly good ground in an open position, drawing the drills not more than an inch deep and 6in apart. Moisten the drills if soil is very dry, and to ensure quick germination cover soil with mat, which must, however, be removed immediately seed germinates.

TRIPOLI ONIONS.—The first sowing may be made now. Select a piece of rich ground which, if loose, should be trodden firmly or rolled over. Draw the drills an inch deep and 9in apart, previously raking off stones to secure a fine surface. The Rocca varieties are among the best.

TURNIPS.—It is best to make small but frequent sowings of Turnips, not all of which may do well. Snowball is as good for present as for spring sowing. Veitch's Red Globe and Chirk Castle Black Stone may be included. Moisture and warmth are essential for quick germination. Thin out earlier sowings.

FEEDING BEANS.—Scarlet Runner Beans with their rank growth and productive powers abstract a considerable amount of moisture and food from the ground. In order that the blooms may continue to set well and the pods to swell freely, moisture must be maintained. In addition, liquid manure may be applied, preferably when the ground is already moist, as it is then not wasted by passing beyond the reach of the roots. Another help in maintaining the plants in bearing condition is to freely pick the pods, allowing none to grow old. A good mulching of manure will conserve the moisture and render watering less necessary.

BROCCOLI.—Any plot of ground that has become vacant may be planted with the later varieties of Broccoli. It is not necessary to dig up the ground, but it should be cleared of weeds and rubbish. Then plant short sturdy plants, using a crowbar if necessary to make the holes, as Broccoli requires firm ground, so that the growth may be continued sturdy and of a character suitable to withstand the wintry weather. If moisture is required water with liquid manure. This will enrich the ground and produce abundance of rootlets. The necessary culture with the hoe to keep down weeds must be practised, this also encouraging growth. Liquid manure will not be required after the plants are established.

CABBAGE.—To make sure of having a stock of plants not too far advanced in size another sowing should be made thinly in drills or broadcast. They may be drawn from the bed direct and planted, or the smallest may remain in the seed-bed for spring planting.

LETTUCE.—A good Cos variety of Lettuce to sow for standing the winter is Black-seeded Bath Cos; Hardy Hammersmith and All the Year Round being excellent Cabbage varieties. Sow thinly in shallow drills.

ENDIVE.—A late sowing may be made of Endive and seedling plants from previous sowings planted out. Those which are large enough for blanching may have inverted pots, slates, or tiles placed over them when in a dry condition.—EAST KENT.

Tree Planting in the Transvaal.

The Transvaal Educational Department has decided to set apart one day in each year for tree planting for the children attending the Government schools.



TO CORRESPONDENTS

* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

PHOTOGRAPH RECEIVED (Robt. Ogston).—We received the photograph safely, and regret not having acknowledged your kindness. We shall use the photograph if possible, and will let you know shortly.

APPOINTMENT AT THE ROYAL GARDENS, KEW (F. W. C.).—Apply by letter to the Director, who will cause a form to be sent to you, which you may then fill in. This form explains the position of applicants.

BOOKS WANTED (F. L.).—The books you seek are Lewis Castle's "Packing of Fruit for Market," 1s. net, with postage, from Messrs. Collingridge, 148, Aldersgate Street, E.C.; and G. Bunyard's "Fruit Farming for Profit," also 1s., we believe, from the author. Get Collingridge's "Vegetables for Profit" series, price 1s. each.

INDIARUBBER PLANT WITH HOLES IN LEAVES (M. J. P.).—The injury would probably arise from sun-spot burnings; at least, strong direct heat causes the leaves to crack and become spotted. Try a moderately light position out of the direct sun; give the plant abundance of water (seeing that the drainage is free and perfect), and avoid cold draughts.

CHRYSANTHEMUMS (W.).—You had better take the crown buds as soon as they form by removing with great care the surrounding growths; but if the slightest injury is done to the buds it will show itself more and more as the buds swell, and the bloom will be imperfect. All the axillary growths should be removed from the stems of the plants, and suckers from the roots.

PLAN AND DIMENSIONS OF BOXES TO CARRY GRAPES FOR EXHIBITION (Q.).—You will find such information as you require, and at greater length than we can afford space for here, in our issues of January 29, 1903, page 103; and February 5, 1903, page 129, with illustrations. The cost of copies of each date will be 4½d. each, post free from our publisher.

ROSES BLOOMING UNHEALTHILY (J. M. W.).—We should attribute the "blue tint" of the red Roses to the cold, unfavourable, wet weather, and especially to the effect of the great rainfalls on your soil, which you describe as "of a heavy nature." The potash and probably iron salts from the soil will not have been sufficiently elaborated in the petals and leaves; thus the blue tint.

OLD BOOK: VALUE OF (J. M.).—We should think 5s. to 6s. a fair price for a seventh edition of Bradley's "Gardening," 1739. We have not seen the book, however, and would suggest your inquiring at a dealer in such books—possibly Wesley and Son, Essex Street, Strand, London. Old gardening books have recently risen much in price, as witness Parkinson's "Paradise in Sole," which a few years ago sold commonly for 3s. 6d., and is now fetching up to three guineas.

WEED ON LAWN AND ITS EXTERMINATION (C. M. H.).—The weed is one of the Lesser Trefoils, either the Yellow Suckling Clover or Lesser Yellow Trefoil (*Trifolium minus*) or the Hop Trefoil (*T. procumbens*); but in the absence of flowers we are unable to say definitely, the specimen being much withered. It may be destroyed by dressing the lawn with a mixture of equal parts sulphate of ammonia and nitrate of soda, applying 11b of the mixture per rod (5½ square yards, not a square rod, 30½ square yards) several times during the summer, or at monthly or six weeks intervals from April to September inclusive. The mixture will gradually destroy the weed by its action on the leaves, also Daisies and other broad-leaved weeds, it being better to repeat the dressing than to give a greater quantity at one time than that mentioned, and though it may at times brown the lawn somewhat by destroying the undesirable herbage it will soon recover, the grasses being encouraged by the dressings, while the weeds gradually disappear. The advertised lawn sand will also answer the same purpose, killing the Clovers and other similar plants that grow at the expense of the more desirable grasses, the latter being the chief things to aim at, especially in a lawn used for croquet, tennis, &c.

BOTTLING PEAS (W. H. Cook).—We shall reply fully in our next.

MANAGING AN ESTATE (F. L. S.).—You would find considerable help from a perusal of the book entitled "How I Managed and Improved My Estate," published in 1886 by Geo. Bell and Sons, of Covent Garden, London. This deals with the choice of an estate, with underwoods, timber, building and quarrying, making grounds, farming and shooting, fish ponds and aviaries, as recorded from Sussex. The work is certainly useful and interesting, though not necessarily a guide book.

MILDEW ON ONIONS (O. S.).—Onions are occasionally attacked with a form of mildew peculiar to the crop and it is very destructive. We should try the effect of syringing them with a solution of softsoap and sulphur, dissolving the soap at the rate of 2oz to a gallon of water, then heat some sulphur into a paste and mix it in the solution till of the consistency of thin cream, yet not so thick that it cannot pass readily through the nozzle of a syringe. If that does not check the mildew and the tops wither the bulbs had better be pulled up, dried, and stored, burning the tops. It will be advisable to have your Onion bed in another part of the garden next year.

POISONING SQUIRRELS (A. T.).—An American friend reports being very successful in killing the squirrels on 3,500 acres of land by thorough and systematic poisoning. He believes his method not only more effective, but quicker than the use of bisulphide of carbon. The poisoning should be done now, and his way of preparing it is to mix one ounce of strychnine, one half ounce cyanide of potassium, and two pounds of sugar, well dissolved in water, to one gallon of wheat; the whole to be stirred until thoroughly mixed; and let stand overnight to allow the wheat to absorb some of the poison ingredients. The ground is gone over three times each year, the quantity of strychnine being reduced after the first time.

INSECT THAT DEPOSITED EGGS ON GARDEN NETTING FIXED ROUND TENNIS COURT (J. F. C.).—The eggs on some of the specimens had hatched out, the larvæ or caterpillars being very lively and very hairy, swarming on opening the small box, and with their large heads evidently bent on foraging. The eggs, and of course larvæ or caterpillars, are those of one of the Tiger moths, we think the cream-spotted Tiger moth (*Arctia villica*); but it is extremely difficult to tell definitely from the eggs and newly hatched larvæ, for the latter are very small and much alike when very young; indeed, those of the common Tiger moth (*Arctia caja*) are very similar to those of the cream-spotted Tiger moth. The caterpillars feed for a time on low plants, not very particular as to what, but as a rule prefer wild to cultivated plants, having a penchant for Docks, Plantains, and other weeds, and hibernate early in autumn. In spring they feed up, and when full grown spin slight cocoons on the food plants, or among dead leaves and surface rubbish, and in them become pupæ, from which the moths emerge in two or three weeks. The moths usually appear about July. The species of the most common occurrence in gardens are the Common Tiger and the Ruby Tiger (*Phragmatobia fuliginosa*).

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (W. W.).—1. *Heracleum sphondylium*; 2. *Epilobium montanum*. (B. B.).—*Nigritella angustifolia*. (C. S.).—*Echinops*, we cannot readily name the species without foliage. (A. T.).—1. *Acacia mimosaefolia*; 2. *Platycodon grandiflorum* Mariesi; 3. *Campanula macrostigma*. (L.).—1. *Salix alba*, the Huntingdon or White Willow; 2. *Salix fragilis*, the Crack Willow; 3. *Salix daffnoides*; 4. *Salix Caprea pendula*, the Kilmarnock Weeping Willow; there are some eighteen British species of Willows. (J. T. M.).—1. *Vitis Coignetiae*; 2. *Vitis* (or *Ampelopsis*) *inconstans*.

Covent Garden Market.—August 12th.

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 0 0	Leeks, bunch	...	0 2 to 0 2½
" Jerusalem, sieve	1 6	0 0	Lettuce, Cabbage, doz.	1 0	0 0
Batavia, doz.	...	2 0 0 0	Mushrooms, forced, lb.	1 0	0 0
Beet, red, doz.	...	0 6 1 0	Mustard & Cress, doz.	...	...
Cabbages, Spring, tally	2 0	3 0	punnets	...	1 6 0 0
Carrots, bunch	...	0 2 0 0	Onions, bushel	...	3 0 0 0
" new, bnch.	...	0 6 0 8	Parsley, doz. bnchs.	...	2 0 0 0
Cauliflowers, doz.	...	4 0 5 0	Potatoes, cwt.	...	6 0 8 0
Corn Salad, strike	...	1 0 1 3	" Jersey, new, cwt.	...	14 0 15 0
Cos Lettuce, doz.	...	1 0 0 0	Radishes, doz.	...	0 9 1 0
Cucumbers doz.	...	3 0 4 0	Spinach, bush.	...	2 0 0 0
Endive, doz.	...	1 6 0 0	Tomatoes, English, lb.	...	0 6 0 7
Herbs, bunch	...	0 2 0 0	Turnips, bnch.	...	0 0 0 2
Horseradish, bunch	...	1 3 1 6	" new, bnch.	...	0 5 0 6

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, Italian, per pad	6 0	to 7 0	Oranges, case	...	10 0 to 20 0
Bananas	...	10 0 15 0	Pines, St. Michael's	3 6	5 0
Cherries, ½-sieves	...	15 0 20 0	Strawberries, South-	...	...
Grapes, Hamburgh	...	1 0 1 6	ampton, per bskt.	0 0	0 0
Lemons, Messina, case	10 0	15 0			

Average Wholesale Prices.—Plants in Pots

Most of the undermentioned plants are sold in 48 and 32-sized pot

	s. d.	s. d.		s. d.	s. d.
Aralias, doz.	...	5 0 to 12 0	Grevilleas, 48's, doz.	...	5 0 to 0 0
Araucaria, doz.	...	12 0 30 0	Heliotrope	...	6 0 8 0
Aspidistra, doz.	...	18 0 36 0	Hydrangeas, pink	...	10 0 12 0
Crotons, doz.	...	18 0 30 0	" white	...	10 0 12 0
Cyperus alternifolius	Lycopodiums, doz.	...	3 0 0 0
doz.	...	4 0 5 0	Marguerite Daisy, doz.	...	6 0 9 0
Dracæna, var., doz.	...	12 0 30 0	Myrtles, doz.	...	6 0 9 6
" viridis, doz.	...	9 0 18 0	Palms, in var., doz.	...	15 0 30 0
Ferns, var., doz.	...	4 0 18 0	" specimens	...	21 0 63 0
" small, 100	...	10 0 16 0	Pandanus Veitchi, 48's,	...	...
Ficus elastica, doz.	...	9 0 12 0	doz.	...	24 0 30 0
Foliage plants, var, each	1 0	5 0	Pelargoniums	...	8 0 0 0
Geraniums, doz.	...	4 0 6 0	Shrubs, in pots	...	4 0 6 0
" Ivy, doz.	...	6 0 8 0			

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.
Arums, doz.	...	1 0 to 2 0	Maidenhair Fern, doz.	...	...
Asparagus, Fern, bnch.	1 0	2 0	bnchs.	...	3 0 to 4 0
Carnations, 12 blooms	0 6	1 0	Marguerites, white,	...	...
Cattleyas, doz.	...	10 0 12 0	doz. bnchs.	...	1 0 2 0
Croton foliage, bun.	0 9	1 0	" yellow, doz. bnchs.	...	1 0 0 0
Cycas leaves, each	0 9	1 6	Myrtle, English, bunch	0 6	0 0
Eucharis, doz.	...	1 0 1 6	Odontoglossums	...	4 0 5 0
Gardenias, doz.	...	1 0 0 0	Orange blossom, bunch	2 0	0 0
Geranium, scarlet, doz.	...	...	Roses, Niphetos, white,	...	...
bnchs.	...	3 0 4 0	doz.	...	1 0 0 0
Gladiolus, The Bride,	...	...	" pink, doz.	...	2 0 0 0
doz. bun.	...	4 0 0 0	" yellow, doz. (Perles)	1 6	2 0
Ivy leaves, doz. bun.	1 6	0 0	" Liberty, doz.	...	2 0 4 0
Lilium Harrisii	...	1 6 2 0	" Generals	...	1 6 0 0
Lily of Valley, 12 bnchs	9 0	12 0	Smilax, bunch	...	3 0 0 0
			Stephanotis, doz.	...	2 0 0 0



Liver Rot Amongst Sheep.

This is one of the most destructive enemies of the farmer, and many a one has been half ruined by a serious attack of it, for it does not merely decimate, but annihilate if it is not discovered in time. Fortunately, the life history of the liver fluke, the parasite which can work such wholesale destruction, is well known to agricultural scientists, and to the majority of farmers, and damage from it may be fully guarded against. Low lying grass land is especially liable to be infested with liver fluke, and a farmer moving from a high to a lowland district may easily suffer a great loss through having had no previous acquaintance with the fluke. Without a stagnant ditch, pond, or swampy ground in it, a field cannot be liable to be infested with liver fluke, and the reason for this can be clearly understood if we briefly study the history of the parasite. The eggs of the liver fluke are laid in the livers of sheep, from whence they pass away in the dung; but they do not hatch until they reach water, and may remain dormant for a considerable period under dry conditions. Having been hatched in water, they swim about until they come across a particular species of snail to which they attach themselves. They afterwards enter its body, where they grow, and in course of time emit other organisms which enter and live upon the liver of the snail; these again produce further organisms, similar to the original fluke; they pass out of the snail and swim about until they attach themselves to a blade of grass and wait there until with the grass they are swallowed by a sheep, whose liver they at once proceed to occupy.

The whole of these changes are so slow, and the effect on the sheep is at first so imperceptible, that a farmer must be very wide awake to discover it before irreparable damage has been done. We have had some experience of the ravages of liver fluke both amongst our own stock and that of neighbours, and have found no cure for sheep once infected; it is therefore the more necessary to use every preventive measure.

A careful reader will notice that in the short history of the fluke given above, the parasite in two of its forms is mentioned as swimming about waiting for a lodging, also the host to which it specially attaches itself is a water snail; therefore, in using preventive measures we must not allow our sheep access to pastures where there are pools of water in which the fluke may have been reared, or must use such means as will destroy the activity of the enemy. To this end there is nothing better than common salt, and we should strongly advise farmers to give a heavy dressing of it to any pastures which abound in marshy places.

Of course, drainage must be attended to, and boggy spots may be much improved thereby, but still there are large tracts of land which lie so low that a wet time converts them into swamps, in spite of every effort made to get the water away. It is on such land that the use of salt is such a safeguard. But there are many farmers who have dry as well as wet pastures, and are able to choose the time for stocking each field. Well, in such cases we should say use salt on the wet land, but do not put sheep on it after midsummer until there has been a real frost. We believe that a careful study of the history of the liver fluke shows that its progress is so slow that there is practically no danger of sheep becoming infected with it before the month of August, but that after August has come in the danger increases day by day until there has been a frost, which can deal death to the parasite. We know farmers of large mixed holdings who never put sheep on their low lying, marshy grass land until there is no mistake about the advent of winter.

But there is the danger of infection from ponds and watercourses even in hilly districts! Certainly! but the danger is a very small one, and there should be little or none if ponds and watercourses are well scoured out and no vegetation allowed to exist in them. They may also be fenced off, and in the case of ponds it is a plan we should recommend. But someone says, "Oh! I wish my sheep to have a supply of water." Well! they can do very well without, and they are very much better without than to run any risk of contamination with the liver fluke.

But what are the signs of contamination? As we said before, it is very difficult of detection unless we are warned, and therefore on the look out. The fluke infests the liver, but its food, strictly speaking, is the blood; and as soon as it obtains a habitation in the system of any sheep a constant and unending draft on the vitality of that particular animal is immediately set up. If, therefore, a flock of sheep is seen to cease thriving, and show signs of debility, the possible presence of liver fluke must be one of the first questions to be investigated. An aggravated, or perhaps it might be better to say an advanced case of liver rot, can be most unmistakably diagnosed by one symptom. If the shepherd turns up the eyelid of the sheep the eyeball will be found of a bluish white, without any sign of the existence of a vein, whereas the eyeball of a healthy sheep will show a beautiful network of veins.

If a sheep is discovered infested with this disease, there is only one cure, i.e., the knife. A breeding flock is especially liable to attack, because grass land is so suitable in other ways for it; but if symptoms of fluke be discovered the best plan is to kill and market the lot at once, for the ewes will gradually lose flesh, few will live to rear a healthy lamb, and none will survive to breed again.

Work on the Home Farm.

There is still plenty of work amongst the Turnips, for there has been rain almost daily, and it has been most difficult to make a thorough job of them. The showery weather has put harvest back quite a week, so there is still time to get the cleaning done if the weather would but take up.

Grain crops have suffered further from the heavy rain, and are now in many cases hopelessly twisted about, and present a problem to the binders. It is a pity that harvest should have been made more difficult, for both Irish and English harvesters

of experience are difficult to find, and the out-of-work townsman without rural experience is of little use amongst heavy laid crops. The chief damage to the corn will be in the increased cost of harvesting, for the ears are plump and well fed, and will ripen well with more sunshine.

A journey through a neighbouring county this week revealed a very different state of things. No laid corn there, but a great shortness of straw, harvest approaching rapidly, and many fields of late sown Turnips not yet touched by the hoe. We came home much consoled and reconciled to our own minor troubles.

One thing attracted our notice during this journey, viz., the frequency with which we passed large stacks of hay and clover, particularly the latter; and although there was an abundance of aftermath, we noticed very few sheep. Are these farmers all crazy speculators in hay, or are they short of capital to invest in sheep? These paying little animals are anything but cheap now, but there is plenty of room yet for a big profit, and we fancy that buyers at our local fair to-morrow will find that they have invested their money well.

It will soon be time to wean early foals, and if the mares are required to do much work during harvest it will be well to separate foal and dam at once, and get rid of the mare's milk before she is again put into hot and heavy work. When a foal is first weaned it should be closely watched, as some excitable young animals are liable to do themselves serious injury if left alone and unattended, until they settle down and become reconciled to the new conditions. It is safer to leave two foals together; they will be company for each other, and be far less liable to injury.

Suburban Poultry Keeping.

The number of suburban poultry keepers has increased enormously during the past fifteen years, and it has been estimated that fully one-third of the eggs produced in this country are now obtained from this source. Suburban residents living in detached or semi-detached villas are as a rule obliged to confine their feathered stock within very narrow limits, such as small wired-in enclosures of 20yds or 30yds square. But can fowls under such circumstances be kept at a profit? I am satisfied that in nine cases out of ten they are kept at a loss. Why is it, then, that so many are kept? They are kept as a hobby, and any loss that is made is more or less compensated by the pleasure of possessing such live stock and securing home laid eggs warm from the nest.

There is, however, one way, and I believe only one, by which a few fowls can be kept at a certain profit, although closely confined; and if it were more generally practised, the number of suburban poultry keepers might yet be increased tenfold. Instead, then, of attempting to rear chickens, or to keep any adult fowls all the year round in confined enclosures, let the poultry yard be tenanted with stock for six months only, from the middle of February to the middle of August. Purchase in February, say, a dozen pullets or one year old hens of a non-sitting breed, such as Leghorns, Andalusians, or Minorcas. During the following six months these fowls will lay quite four-fifths of the eggs that can be expected from them if kept the full twelve months. We therefore get a maximum of eggs during these prolific egg laying months at a minimum cost of food and labour of attending. The fowls when bought in may cost from 2s. 6d. to 3s. 6d. each, and when sold out in August will commonly realise from 1s. 9d. to 2s. each, as they will then be in good condition for killing. All surplus eggs laid during the summer should be dropped into water glass, lime pickle, or otherwise preserved for autumn and winter use. By adopting this simple plan you escape the six unprofitable months in all poultry yards, and in too many instances the handsome profit made during the spring and summer months is more than eaten up during the autumn and winter.

Again, very few people are successful in keeping fowls in small enclosures, however well attended, in either health or profit for twelve consecutive months, to say nothing of the increased labour and misery of attending to such stock in all weathers through our inclement winters. No fowls produce so many eggs during the laying season as those confined in suburban runs. This is owing to the better care and attention which they receive, the shelter afforded, and the table scrap food which is so conducive to egg laying. The best varieties of fowls for egg laying are now so generally and largely bred throughout the length and breadth of our land that there can be no difficulty in securing a dozen head or so of suitable stock, and at a moderate price, to place in one's pen in the spring of each year. There are probably a quarter of a million amateur poultry keepers who, by adopting this suggestion, may convert a loss into a certain gain, as well as avoid the many diseases which sooner or later bring disaster to all poultry keepers who attempt to do too much upon a limited space.—K. B. BAGHOT DE LA BERE, Burbage Hall, Leicestershire.

ESTABLISHED 1832.

No connection with any other firm of a similar name.

Successors to the late BARON VAN PALLANDT.

ANT.
ROOZEN
& SON'S

CATALOGUE for 1903

of *SPLENDID*

DUTCH,
CAPE, AND EXOTIC
BULBS

(With *CULTURAL DIRECTIONS*)

Is NOW READY, and will be sent Post Free on application to themselves direct at **OVERVEEN, HAARLEM, HOLLAND**, or to their General Agents—

Messrs. MERTENS & CO.,
3, CROSS LANE, LONDON, E.C.

LONDON FERN NURSERIES,

LOUGHBORO' JUNCTION, LONDON, S.W.—Stove and Green-house Ferns, large and small, in var., Aralias, Grevilleas, Cyperus, Ficus, Ericas, Palms, Dracenas, Aspidistras, Roses, Azaleas, Carnations, Crotons, Camellias, Chrysanthemums, Cyclamen, Bouvardias, Asparagus, Araucarias, Solanums, Aspidistras, Cinerarias, Genistas, Marguerites, Geraniums, Primulas, Orange Trees, &c. Trade, send for Wholesale List. Special Retail Catalogue, free.—**J. E. SMITH.**

The EXPORT Nurseries.

J. J. THOOLEN,

HEEMSTEDE, NEAR HAARLEM, HOLLAND.

HAS the honour to announce that his Illustrated Price List of Bulbs and Plants, in English, Autumn, 1903, at lowest prices, will be sent post free on application. No charge for packing. Orders of 10/- and above entirely free to destination in England, Scotland, Ireland, &c.

SOME SORTS OF BULBS NOTED OUT PRICE LIST.

	Per 100.	Per 1000.		Per 100.	Per 1000.
	s. d.	s. d.		s. d.	s. d.
Hyacinths , in the finest mixture, for bedding or forcing ..	9 0	85 0	Montbretia crocosmaeflora, orange-scarlet ..	1 6	—
Hyacinths , Single, first size, named, in several leading sorts, red, white, and blue varieties, equal quantities, my selection ..	16 6	—	Montbretia , very fine, mixed ..	2 6	—
Tulips , Single early, in the finest mixture ..	2 0	18 4	Dahlias , Single, in the finest mixture ..	8 4	—
Tulips , Double early, very fine mixed ..	2 2	20 0	Anemone , Single, mixed ..	1 2	10 0
Sparaxis , very fine, mixed ..	0 8	6 0	Anemone , The Bride, pure white ..	1 4	12 6
Triteleia uniflora, pure white, very fragrant ..	1 6	—	Anemone apennine (blue Wood Anemone) ..	3 0	25 0
Ixias , in the finest mixture ..	0 6	5 0	Anemone apennine (white Wood Anemone) ..	5 0	—
Crocus , first size, in the finest mixture ..	0 17	8 0	Dielytra spectabilis, red (Bleeding Heart) ..	20 0	—
Crocus , second size, in the finest mixture ..	0 5	4 0	Funkias , in the finest mixture ..	10 0	—
Crocus , yellow, third size ..	0 6	4 2	Narcis. , Polyanthus, in the finest mixture ..	5 0	45 0
Lilium longiflorum, pure white trumpet ..	16 0	—	Narcis. , Double, mixed ..	3 6	30 0
Lilium tigrinum, the Tiger Lily ..	10 0	—	Narcis. , Single, mixed ..	1 4	12 6
Grape Hyacinth , blue ..	0 8	—	Narcis. , Trumpet, mixed ..	2 6	20 0
Scilla sibirica, rich blue ..	2 6	23 4	Narcis. , Campanelle, pure yellow ..	1 2	10 0
Spanish Iris , in the finest mixture ..	0 8	6 0	Ranunculus , French, mixed ..	1 0	9 0
Iris Kämpferi (Japan Iris), mixed ..	5 0	45 0	Ranunculus , Persian, mixed ..	1 0	9 0
Iris sibirica , very fine, mixed ..	4 0	40 0	Snowdrops , Elwesi, Giant Snowdrop ..	1 8	15 0
			Gladiolus , Marie Lemoine, cream ..	2 6	—
			Gladiolus , Colvillei, pink ..	1 6	14 0
			Azalea ponticum, each, 10d. to 1/8.		

250 Bulbs of the same kind will be charged at the 1000 rate; 25 at the price per 100; 6 at the price per 12.

Collection D.—For Spring Garden, containing 1330 Bulbs, £1 1/-. Half of this, 11/-.

Collection B.—For Indoor, containing 629 Bulbs for 92 pots or glasses, £1 1/-. Half of this, 11/-.

No. 1203.—VOL. XLVII., THIRD SERIES.

CLIBRANS**CHOICE
FLOWER SEEDS**

For Present and Autumn Sowing.

	PER PKT.
CLIBRANS SUPERB AQUILEGIA ..	0/6
CLIBRANS PRIZE CALCEOLARIA ..	1/6 & 2/6
CLIBRANS CANTERBURY BELLS ..	0/6
CLIBRANS CHOICEST CINERARIAS ..	1/6 & 2/6
CLIBRANS LOVELY DELPHINIUMS ..	0/6
CLIBRANS SELECTED DIGITALIS ..	0/6
CLIBRANS Superb Double HOLLYHOCK ..	1/0 & 2/6
CLIBRANS SELECTED MYOSOTIS ..	0/6
CLIBRANS LOVELY PANSIES ..	1/0
CLIBRANS CHOICEST PENTSTEMONS ..	0/6 & 1/0
CLIBRANS GRAND POLYANTHUS ..	1/0
CLIBRANS EAST LOTHIAN STOCKS ..	1/0
CLIBRANS SWEET WILLIAM ..	0/6
CLIBRANS CHOICE WALLFLOWER ..	0/6 & 1/0

Mixed, or in distinct colours and varieties.

All other Seeds as per Catalogue.

MANCHESTER & ALTRINCHAM**BULBS RETAIL.****Isles of Scilly Narcissi & Daffodils**

In splendid Flowering Condition.

Apply—**T. G. BROWN, BULB GARDENS, TRESCO**

Price 2/6; Post Free 2/7½.

THE PINE APPLE MANUALBy Contributors to the "*Journal of Horticulture*."

ILLUSTRATED WITH ENGRAVINGS.

Being a Guide to the Successful Cultivation of that Fruit, and to the Construction and Management of the Pinery.

Office: 12, MITRE COURT CHAMBERS, FLEET STREET, E.C.

**Journal of Horticulture.**

THURSDAY, AUGUST 20, 1903.

Table Decoration.

IN this, as in every other department of the decorator's art, we find tastes differing and fashions ever changing. For these reasons it is a most difficult matter to set up a standard work which, for any appreciable length of time, can be of utility to the operator, whether he be an expert or a novice. Some great ladies have distinct and original ideas of their own, and for them any rigid formula would be useless.

The same remark equally applies to many decorators who are also gardeners. There are still people who love to see their tables converted into miniature flower shows, and to have them dressed in a mass of glowing, heavy colours. On the other hand, it is a matter for pleasant contemplation to find a growing desire for grace and simplicity.

Reference has been made to the difficulties to be met with in bringing out a durable work on this subject. Such books, are, I believe, seldom met with, but one was, some years ago, placed in my hands in the hope that it might be found useful in what, at that time, was my daily avocation. Many of the designs and notions it contained were far too heavy and intricate at that date, and I fear that nowadays the bulk of them would be pooh-poohed and made light of. But it would be unfair to say that modifications of some of the ideas in the book were not of great assistance; they were indeed, a few of them, of very real help.

To see tables dressed to perfection they should be seen when prepared for a large party in the height of the season at one of the great London houses. When arranged as only a first-class West-end florist can arrange them, they are sufficient to send a poor country decorator back in despair to his humdrum ways and a survey of the impossibilities

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "**THE EDITOR**," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

existing in his task. For it certainly is impossible for any gardener of my acquaintance to employ numbers of women daily, mounting, arranging and designing. Still, with the time and material he has at hand, the common or garden decorator may produce, with a little care and forethought, some charming effects.

I notice a writer in a contemporary advocating the claims of the *Schizanthus* as a table flower. In a cut state this is undoubtedly very light and graceful, and in daylight is certainly beautiful; but under artificial light it wears a most dejected and washed-out appearance, owing to the tints not being sufficiently clear and decided. This, however, can scarcely be looked upon as coming under our heading of "summer decorations," and is merely noted as a warning, to show that what is most elegant and suitable at the luncheon hour may be at dinner-time a disreputable-looking object.

At this season of flowering plenty it is scarcely necessary to speak of the use of plants for the table, as few people care to see them unless they are used as a change. With Sweet Peas, Roses and Carnations, besides a host of other flowers now given us in profusion, it is a wise plan to take this season for the rest and preparation of small decorative material which will be of service later on in the year.

Roses, when grown in large numbers, form a means of supply upon which we may draw to carry out an almost endless number of ideas. The common Monthly or China is far more effective for decorative work than would be readily credited by those who have not seen the rich pink blossoms used on a large scale. From strong-growing dwarf plants long stems can be cut, which answer well for arranging in vases, about five of these (one large for the centre and four smaller ones) being a sufficient number for quite a large table, if a simple design of flowers and foliage is placed upon the cloth. W. A. Richardson, if procurable in quantity, is another variety that commends itself to notice if a table is desired to be dressed in one colour. Unfortunately, that fine golden tint, so much admired, is not always to the fore, and the blooms themselves are frequently misshapen and ragged; but when procurable in fine form a very beautiful table can be set out with this Rose.

Euphrosyne, one of the Rambler class, would, upon first appearance, scarcely commend itself to every decorator; the large clusters of small pink flowers giving a sense of clumsiness. But with care in arrangement, delightful results may be obtained by its use. It has, however, a brief season of blooming, and there is not much danger of a too frequent repetition in using this Rose.

Many different sorts of various colours may be mingled, and very few there are that clash one with the other. In any case, whether mixed or in separate colours and varieties, the flowers ought to be set up with Rose foliage only. No other that I know suits them so admirably, and though no stickler for "flowers with their own foliage"—an idea so ardently pursued by some—here is certainly an instance where the idea holds good and has much to recommend it.

Turning to Sweet Peas, what a wealth of material is provided by these flowers for the decorator's art. Lady Mary Curie and Salopian are fine for effect under lamp or candle-light. Those who love brilliance may well try Gorgeous, but this I think too glowing in hot weather. Mrs. Dugdale and Lovely are both charming for a pink table, but some of the lighter tints with the blues are anything but showy for the evening. They have their uses for daylight purposes and are so beautiful that we cannot afford to ignore them. Rather narrow glasses are best for these flowers; a sufficient number can be efficiently arranged in a rather small vase, and as the greenery used with them must be of the lightest, it is obvious that the use of wide receptacles would only result in loose, unsatisfactory arrangement.

Gypsophila and unripe Grasses are frequently used with Sweet Peas, and both can be made to look eminently suitable, but nothing, I think, equals their own shoots in effectiveness for this purpose. For tracing I have many times used Smilax, and though this by most people is found satisfactory, I infinitely prefer to use healthy growths of the Peas, as being more in keeping with the dainty blossoms.

What can be said of Carnations which has not already been many times uttered? Malmaisons we now have in many shades of colour, but the old pink and blush are still as grand as ever for table work, and for that ancient veteran, Raby Castle, nothing but praise can be given. Germania, when it thrives properly, is difficult to beat as a yellow. For mingling with the blooms, fronds of *Adiantum* are quite per-

missible, and will provide a light and elegant setting; so will young growths taken from the *Asparagus* beds; but if a bolder and more decided effect is desired, then use healthy, but not too robust "grass" or pipings.

Much could be written of the claims of other flowers. Of *Coreopses*, of long spurred *Aquilegias*, *Rudbeckias*, *Allamandas*, some of the *Cattleyas*, and hosts of others that well deserve a share of notice. All and each may be relied on to render service where provision is made for their cultivation. Most of the plants mentioned will be within the reach of nearly everyone possessing a garden, and will give ample scope for the display of ability in decorative arrangement. Let me add, in conclusion, three points which must be earnestly striven for—lightness, grace—and though these two in perfection may be thought by some to insure the last, let me also add, proper effect.—PROVINCIAL.

Early Potatoes from Ireland.

Under the inspiring influence of an energetic and well-staffed Department of Agriculture, which has large sums of money at its disposal, the Green Isle is "forging ahead" in every way except in the matter of population, in which, however, it is falling astern. As a country which is pre-eminently adapted for the breeding of store cattle, Ireland has for some years enjoyed a measure of protection through the operation of the Diseases of Animals Act, which absolutely prohibits cattle, sheep, or pigs from outwith the United Kingdom being landed at our ports except for immediate slaughter. Just as Canada aspires to be the granary of the Mother Country, so Ireland aspires to be the great source of supply for Scotch and English "feeders." The latest Irish statistics, however, show that a great deal of land in Ireland which was formerly under arable cultivation is now being laid down to permanent pasture, to be used solely for stock-breeding purposes, and the Irish Department have for some time been harbouring a doubt as to whether this change, which undoubtedly makes for rural depopulation, is altogether for the good of "the most distressful country." The Irish Department, therefore, looked about for some means to counteract this policy of laying down land to permanent pasture, and they decided to try and make Ireland a second Jersey in the growing of early Potatoes and market garden produce.

Two years ago the Irish Department of Agriculture engaged Mr. Wallace, Terreglestown, Dumfries, who is undoubtedly one of the most enterprising and successful growers of early Potatoes in Scotland—and one of the best all-round farmers in Scotland—to go to Ireland and instruct the Irish farmers in the best methods of growing early Potatoes. Mr. Wallace executed that commission in a thoroughly efficient way, and his admirable lectures and illustrations on the subject—some of which were reproduced in our columns at the time—were such as to show anyone how to cater successfully for the early Potato market if he only had suitable soil and climate for carrying on that trade. Mr. Wallace also surveyed the land, and pointed out that some parts of Ireland, notably the fertile soil of Inchdorry Island and other parts round Clonakilty in County Cork, were most admirably suited for the growing of early Potatoes from boxed seed.

Last spring a number of landowners in that district, acting under the superintendence of an agricultural expert from the Agricultural Department, put Mr. Wallace's instructions into practice, and the results have been very gratifying to those who had the good fortune to be in the business. One of the growers, Mr. J. Crowley, had his Puritans harvested in the third week of June, and they yielded at the rate of five to six tons per acre. Mr. Crowley's entire crop had been bought beforehand by Liverpool buyers at £50 per acre, and as these Potatoes were in the market before the early Potatoes in the Girvan district were ready, the buyers must have done as well by them as the grower had done. Another grower, Mr. O'Leary, had his Potatoes sold at £12 per ton, so that if he raised a crop of six tons per acre he would do well with them too. The outstanding success which has attended the first attempt to put in practice Mr. Wallace's instructions as to the growing of early Potatoes in Ireland will undoubtedly have the effect of causing a greatly increased acreage in Ireland to be devoted to this crop next year, and as these early Potatoes from the Green Isle have the enormous advantage of being ready for the market before the stocks on the Ayrshire coast are ready, the Irish growers will have the best of the trade, and it may well be suspected that the early Potato crop in Ayrshire will not prove so profitable to the growers in the future as it has been in the past.—("North British Agriculturist.")

**Phaio-Calanthe × Sedeniana.**

This bigeneric hybrid obtained a first-class certificate in 1894 when staged by Baron Sir Henry Schröder. Messrs. J. Veitch and Sons, Ltd., were, however, the raisers of it, and the name of its hybridist is conveyed by this variety. The parents were *Phaius grandifolius* and *Calanthe Veitchi*. The flowers are creamy white, tinted pale rose, and are borne in tall spikes.

Cypripedium leucorrhodum.

Although an excellent likeness of this *Cypripedium*, the figure on p. 119 may mislead amateurs unacquainted with the charming set of hybrids to which it belongs. The pose of the flower is very like that of the single flowered scape as seen in *Cypripediums* generally, whereas in *C. leucorrhodum*, as in *C. Sedeni*, its near relation, several flowers are produced on a spike. These are among the most useful and beautiful in the genus, almost always in flower, and of delicate and charming tints of colour. No one who grows Orchids, if ever so few, can afford to do without the Schlumi and longifolium section or the hybrids from it.—H. R. R.

The Week's Cultural Notes.

Where the Mexican section of *Laelias* are kept by themselves in a light and practically unshaded house or compartment, they will by now be getting well hardened, and in some at least the flower spikes will be showing. But in the case of plants growing in company with *Cattleyas* and other Orchids that require more shade, some attempt must be made to get them well up to the roof glass in quite an unshaded position. They must not be shifted direct from one extreme to the other, but given moderate shade at first, removing this by degrees until it can be dispensed with entirely.

Most of the plants will have been potted in the early months of the year, and will by now have taken a firm hold on the compost and baskets or rafts in which they are grown. Consequently, they will be taking water very freely, and the free ventilation will dry them up rapidly. This is the kind of treatment they delight in, being quite soaked out with moisture one day, the next quite dry, and plants so treated will always be far healthier than others moving along in a compost never really dry. Free rooting can always be insured by these means, as the roots are put forth to look for moisture not caused by it.

It may be well just now to draw attention to the fact that it is almost impossible to overwater pseudo-bulbous Orchids when the bulbs are finishing. In spring it is different; the bulbs are storehouses of nutriment, and this is given off to the young growing shoots at a time when they are tender, so that overwatering then is dangerous as well as unnecessary. But now the bulbs are storing this nutriment while roots and leaves are solid and strong, not at all likely to be damaged by an overdose. The course then is quite plain, and it is almost impossible to err on the side of abundance with deciduous kinds as long as the leaves are fresh and the weather fine.

Catasetums, *Cycnoches*, *Dendrobiums*, *Chysis*, *Anguloas*, and all such sorts must be fed in late summer if they are to produce strong, healthy breaks in spring. When *Dendrobium chrysanthum* has practically finished growing, and there are no signs of the flower nodes swelling, too great light and air must be avoided, as it is apt to dry the stems and imprison the flower buds, but as soon as these are well away the ripening may proceed, the somewhat drier conditions serving to keep the plants from growing unseasonably.—H. R. R.

Carnations at Keevil Manor.

For many years Keevil Manor, near Trowbridge, has had a local fame for its Carnations, Sir John Wallington being a keen enthusiast and a true lover of the florist flower. Keevil Manor dates from the fifteenth century, and is a fine and well preserved example of that early period. In the garden are clipped Yews, designated the twelve Apostles, and which afford the place quite an historic bearing. How many years these trees have been planted is beyond the capacity of existing memory.

Though the garden has so long produced its annual crops, there is still a wonderful freedom in almost everything planted, whether it be fruit, vegetable, or flower; and Carnations certainly grow and flower with wonderful perfection, given normal seasons. They are usually planted in beds, and in flowering time are protected with sunshades stretched over a framework

fixed for the purpose. This year a circumstantial misfortune which overtook the stock in winter so reduced them that a large portion of the plants remaining were confined to pots, and at flowering time accommodated in the greenhouse.

An invitation is extended to anyone interested by Sir John Wallington to inspect them when in bloom. An investment in the newest introductions is made each year, older ones and those of lesser merit being discarded from time to time. Only the very best will satisfy this veteran grower, and his standard is a very rigid one. A bed of seedlings grown from the best procurable strain that is offered failed to produce one worthy of a commendable note from him, because they fell short in some degree of the florist's standard.

At the time of my visit many of the flowers had been cut and others passed their best; but a few remained, sufficient, at any rate, to prove that the reputation of Keevil Manor, so long maintained, is based on quality of the highest class, and is varied from year to year by newer introductions. A few of those noted include *Amphion*, a magnificent flower of the Fancy or Picotee section, having a yellow ground with a bright rosy edge and markings; *Lady Audrey*, Sir Beys, a fine crimson self; *Gaston de Foix*, Chas Martel, a Fancy with creamy ground, striped and margined with scarlet; *Bannar*, a good scarlet self; *Nox*, the darkest of the maroons; *Seymour*

**Phaio-Calanthe × Sedeniana.**

Cochran, *Jocelyn*, *Barras*, bright scarlet; *Bendigo*, the nearest approach to a blue Carnation; *Countess of Verulam*, *Bertie*, a very pretty Picotee; *Almoner*, a fine yellow. *Helmsman* and *Henry Faulkner* are two good hardy varieties, and *Cecilia*, the finest of the yellow selfs, have been grown outdoors to 4½ in diameter, the colour clear, and the pods non-bursting.

These are only a tithe of the number of varieties grown, but many more will be added for another season's display. Though Sir John Wallington has passed the allotted span of life, and has some time since celebrated his golden wedding, he is still as enthusiastic and active among his favourite flowers as some many years his junior. Seldom does he leave home without his favourite coat flower. The *Malmaison* does not appeal to his sympathies, but the hardy border Carnation he stands by as being the best of all.—W. S.

Injurious Insects.

Twelve insects will cost the United States £70,000,000 this year. The chinchbug will draw £20,000,000 of this amount, the grasshopper will take £18,000,000, and the Hessian fly will call for at least £10,000,000 more. Three worms that attack the cotton plant will assess the farmers for a total of £12,000,000, and the Potato bug will eat 2,000,000 worth of his favourite kind of garden products. Two million pounds worth is a moderate estimate of the injury that will be done by the Apple worm, and the caterpillar that makes Cabbages its speciality, will destroy £7,000,000 worth of crisp green heads.



Feeding the Plants.

Now that the growing season of the autumn queen is with us, and in view of the great efforts that are being made for the autumn exhibitions, the work of the joint committee of the National Horticultural Society of France and of the French Chrysanthemum Society will be of value. It was endeavoured to ascertain by practical experiment what are the best artificial manures to employ. M. Georges Truffaut, who has rendered signal services by his investigation of plant foods, made the report.

Nine cultivators, scattered over as many districts of France, first all submitted for analysis samples of the soil they intended to use, no manure of any kind being added. Each of the nine growers experimented with a single variety. Mdme. Gustav Henry, a variety of moderate vigour, and with pure white flowers. M. Nonin had also Mdme. Laurence Zede, a more vigorous variety.

The plants were all grown in three ways—first, three stems; second, six stems; third, without any disbudding. Twenty-four plants were grown in each of these three ways. Of the twenty-four observed by each cultivator in each of the three sections, four received no manure, and served as check plants; four received a complete manure; four a similar manure, but in double quantity; four a complete manure with no nitrogen; four a complete manure with no potash; four a similar manure from which the phosphoric acid was eliminated. The manures were mixed with the potting soil in April, and, from August onwards, they were given in the form of solution.

The Complete Manure.

The "complete" manure was composed as follows: Fish guano, twenty-five per cent.; dried blood, sixteen per cent.; sulphate of potash, twenty-four per cent.; double superphosphate, thirty-five per cent.; the analysis of which gave four-fifths nitrogen, eleven-twelfths potash, fifteen-sixteenths phosphoric acid.

The soluble manure consisted of phosphate of potash, fifty-four per cent.; nitrate of soda, forty-six per cent.; or nitrogen, 6.9 per cent.; potash 11.04; phosphoric acid, 20.52.

The quantity used was at the rate of 900 grammes to 100 kilogrammes of soil. The solution was used in the proportion of two grammes to one litre of water. The plants under treatment were exhibited at Angers last November.

The principal object of these experiments was to show by growing in sterile soil (white sand), the influence of nitrogen, potash and phosphoric acid respectively. The object of the other experiments was: First, to show the influence of the complete manure in soils of varied character, but of known composition; second, to study the influence of climate or season on the action of the manures, and the cultivation of one and the same variety.

The most successful result at the end of the experiment, was obtained where a double dose of the manure was employed; then came the plants treated to a single dose of the complete manure; next in descending order, plants grown without potash, without nitrogen, and the worst of all (except the unmanured plants) were those plants which had no phosphoric acid.

Phosphoric Acid is Essential.

Phosphoric acid is thus shown to be of great importance to Chrysanthemums, and necessary to the formation of good colour in the foliage. Plants deprived of this ingredient had yellow foliage and a weak habit. Without potash, the plants produced long, weak stems, broad, thick but flabby leaves, falling off from the least cause. The flower stems were large, hollow, but limp, the flowers large, but of bad shape.

When nitrogen is absent the plants are feeble, pale in colour, the leaves small and thick, the stems of small diameter, the flowers few in number, hollow in the centre, and of small size.

M. Truffaut, in summing up the results of this series of experiments, advises cultivators to prepare a good compost of two-thirds sandy loam mixed with leaf mould, and to submit the compost to a chemist for analysis. The chemist will then be able to ascertain if the requisite elements are in due proportion or not, and to advise accordingly.

What Nitrogen May Do.

Nitrogenous manures, it is found, should only be applied in small proportions, as plants grown with an excess of nitrogenous manure are more subject to the attacks of rust. Nitrogen is most

conveniently applied by means of dried blood, horn shavings, or guano in the requisite proportions; potash is best applied in the form of sulphate; and bone phosphate yields the necessary phosphoric acid. Soluble manures are requisite in the case of plants cultivated in pots from the middle of August.

Early Flowering Varieties.

I am sending you a few flowers of early Chrysanthemums picked from out-of-doors; not because they are wanted so early in the season, but merely to show that several of the newer kinds are vieing with Mdme. Marie Massé, and its sports, as to which shall produce their flowers first.

I am not sending many of the older varieties, for, apart from the Massé family, Mdme. Casimir Perrier and a few pompons, there are not many in flower. This season we are growing as many sorts of earlies as I could possibly get together for trial; and there are over 250 sorts, numbering altogether over 40,000 plants on the ground at the bottom of Earlswood Common (all early flowering varieties).

Bud-taking on Japs.

Our best Japs have migrated to the new premises at Merstham. So much wet is not favourable to the pot plants, and if we are to have a continuation of wet weather, I guess the sooner the buds are secured the better; in fact, during this week we have secured a good number, which, had the weather been dry and warm, we would have let them gone away to a later bud.—W. WELLS, Earlswood.

The foregoing letter from Mr. Wells, together with a delightful armload of fresh and fragrant flowers, stirring again our love for the autumn queen, is his response to an invitation of ours for notes on this favourite flower. The season is young yet; but Chrysanthemum growers, like ardent rosarians, or devotees of any other flower, can always enjoy references to their favourites. If, therefore, any cultivator of this popular plant has matter of interest to communicate, we should be happy to be the medium for its conveyance.

The flowers sent by our correspondent comprise some of Goacher's new unnamed varieties for 1904, and such novelties of last spring as

CARRIE, coloured deepest yellow, the exact shade (and almost the make) of a Dandelion. The flowers when disbudded to twelve or twenty on a plant are 4in, but if left undisbudded they are about 3in, and the most prolific, good for pots or borders, market or otherwise, lifts well, keeps well, and is the admiration of all, never shows an eye, and will never die out. A.M. at the R.H.S.; 2ft.

NELLIE, yellow, similar colour to Phoebus, but the make of the flower is more like Elaine, 4½in in diameter, has stiff stems, and is a good one for disbudding; 2ft.

GERTIE, salmon pink shaded gold, one of the most fascinating colours; it is rather too large to be classed as a pompon, but the shape is perfect, and the habit everything that one can wish. It has received an A.M. at the R.H.S.; 1½ft.

KITTY, pure pink, flowers about the size of Blushing Bride, a beauty for cutting in sprays; 2ft.

There are the following: ROI DES BLANCHES, a graceful, firm flower of a pure, glistening white.

PARISIANA, with good sized flowers, almost white, with a sweet, creamy centre, an exquisite flower.

CHAMP DE NEIGE, a very floriferous, stout, broad-petalled white, though tinged pink in the bud.

GOACHER'S CRIMSON, that gem of new early flowering market Chrysanthemums, is here; and the purplish crimson of its petals, backed and tipped by a plating of old gold, together with the largeness and artistic grace of its blossoms, combine to make this a variety quite indispensable to all growers. As a pot subject, too, it is unsurpassed.

MADAME MARIE MASSE var. is represented by a sturdy shoot carrying eleven fine flowers, reminding one of the Jap., La Triomphante of past days.

Lastly, there are Madame Casimir Perrier (pink), and its sport, Mrs. A. Willis, almost canary yellow, streaked, and run with faint crimson. Both are dwarf, and exceedingly free.

Crops in the Fens.

The cutting of Peas, which are extensively grown in South Lincolnshire, was commenced a week ago, and next Monday a start will be made with Oats; but Wheat will not be begun for another ten days. A journey recently through the great Corn and Potato growing district, of which Spalding is the centre, showed that cereal crops had been badly laid, and farmers stated that twice as much labour would be required to harvest them, owing to the damage done by the recent stormy weather. It is anticipated, however, that the improvement which has taken place in the Potato, Mangold, and other root crops will nearly compensate for the increased cost of harvesting the corn.



Stocks for Roses.

I agree with a great deal that "W. R. R." says on page 148, especially as to rushing into print about Rose stocks. It was, when Rose showing first began, I well remember, irresistible, and even beguiles me now into offering an opinion. "W. R. R." does not mention standards. To my mind, these have never been fully appreciated, and in my thirty years of growing show Roses I found nothing like them. They are not back-breaking to bud; they are easy to get to root, and they give, I always found, almost unsurpassable maiden blooms. I remember a well known nurseryman, who in the seventies always showed from his maidens, always managing to sell off his whole stock; and then every autumn planting out his fresh hundreds of Briar stocks, every one with at least a foot deep of good manure beneath it.

I was myself exceptionally well placed for getting Briars. In my Surrey parish my farmers most graciously gave me the run of all their hedges in November, and my two or three days "briaring" used to supply me with the three or four hundred stocks I needed. I then always thought that for exhibition H.P.'s there was nothing like a good Briar stock; whilst half-standards always seemed to me to give the best Teas. If not wanted for exhibition, high standards certainly make the finest show, and here in Berkshire a well known Rose grower at Aldermaston has Teas of great magnificence upon standards of all heights.

As "W. R. R." remarks, it is most pathetic to see the poor plants so often buried before they are dead. In many gardens the soil rises higher and higher up the stem with each yearly manuring, until the marvel is that the plant flowers at all. One other standard advantage I must mention before dropping my pen: a standard Briar's suckers are honest, open, and unmistakable; not like those of the insidious Manetti and De la Grifferie, which I continually observe in gardens here with their half or three-quarters murdered foster children.—A. C., Reading, August 13.

Evergreen Shrubs for Seaside Planting.

In his useful recommendation of shrubs suitable for this purpose (page 148) your veteran correspondent, Mr. G. Abbey, includes *Euonymus japonicus*. This reminds me that it is par excellence, the villa frontage hedge at that charming seagirt Sussex town of Worthing, so famous for emporium of Grape, Tomato, Cucumber, and Melon cultivation. There hedges of it from a yard to even six yards high strike the visitor with wonder and admiration, and in effect even surpassing the less lively greenery of the common Holly, which latter, however, it is needless to observe, affords the more protective element as a fence. Contributing also to the scenic effect is the variegated golden form of the *Euonymus japonicus*, which appears to luxuriate equally with its prototype there, though comparatively much less in adoption. Its introduction from Japan to England occurred nearly seventy years ago, while the original variety was introduced about thirty years previously.

Some of the older established plantings of the subject in question at Worthing, and when not closely pruned or allowed to grow unrestrained, eventually produce fruit more like the scarlet berries of the Butcher's Broom (*Ruscus aculeatus*) than those of the Holly, though not nearly in such profusion as the latter. Of course, my observations relate to the *Euonymus* where sheltered from the direct exposure to the sea; otherwise, if sheltered by a retaining wall or other suitable fence, both the green and golden varieties luxuriate in close proximity to the seashore, as exemplified at Worthing.

Apropos of the formation of a hedge of *Euonymus*, a novel design is that to be observed in a few instances at Worthing, with a foundation of a wattled Hazel wood fence, about 3ft high, and which serves as a protection and support to the *Euonymus* in its initial stage of growth. The shoots protrude through the interstices of the fence, which, in the course of a few years, is completely enveloped by the rapid growing plants. The fence had, in the meanwhile, presented a pleasing rustic appearance, and, in fact, much more so than one composed of open palings.

In conclusion, it has just occurred to me that there is another shrub worthy of notice, and not mentioned by Mr. Abbey, that is the common *Tamarix* (*Tamarix gallica*), an excellent seaside plant, extensively planted along the South Coast; but, strangely,

not so at Worthing, excepting somewhat sparsely as a hedge plant in front of inner villas, forming as it does by reason of its pale green elegant and slender *Cupressus macrocarpa* like growths, a very pleasing contrast to the other various kinds of hedge shrubs. It is also readily amenable to the pruning shears or knife. Slips or cuttings readily root in the moist sea sand.—W. G.

The New Garden of the Royal Horticultural Society.

In view of the large number of letters I am receiving asking if Wisley Garden can be visited by Fellows, will you be so kind as to permit me to say that at present the property has not yet been handed over to the Society, and that none of our officers are there as yet. It is therefore impossible to open it to the Fellows at present. In fact, some few months will probably elapse before that can be done, but due notice will be given to all Fellows as soon as ever it is possible.—W. WILKS, Sec.

Flowering of Hardy Bamboos.

It is seldom we have the opportunity of seeing in this country any of the hardy Bamboos flowering in the open air. This year, however, is an exception to the general rule; for here, and probably in other parts of the country, they have flowered and are producing seed freely, and eventually I hope to have seedling Bamboos raised from home grown seeds.

So far only one species has flowered here, that being *Arundinaria Simoni*, and it is remarkable that plants lifted and divided as recently as the last week in April have flowered and are maturing seed quite as freely as old and established plants. It was thought at one time that when the plants flowered they died; but that is far from being the case, as not only are fresh shoots springing from the underground rhizomes, but the fruiting branches are also producing new growths, and appear likely to survive for a considerable time the production of their fruits.

It would surely be interesting to know what reasons can be assigned for this sudden floriferousness on the part of plants that, though old and well established, have never been known to flower before. We must bear in mind that the climatic conditions which have prevailed in this country for the past two years have been favourable to the better growth and development of these giant Reeds, and in that fact we shall probably find the cause. It would be instructive and interesting to have the views of other Journal readers who possess collections of these noble and decorative plants.—S. POPPLEWELL, Stokko Gardens, Wilts.

[*Arundinaria Simoni* habitually flowers in Earl Ilchester's London garden.—Ed.]

A Plea for the Mole.

A writer in a recent issue of "The Daily News" says that "farmers owning much pasture land do not speak highly of the mole." That is quite true; there is a venerable and obstinate prejudice to overcome; but facts are facts, and text-books and works of reference clearly prove that the mole is not a destructive animal.

M. Flourens states that the mole, if not exclusively, is essentially carnivorous, and probably the most voracious eater in the animal kingdom. He feeds on worms, snails, slugs, caterpillars, cockchafer grubs, and many other subterranean and surface creatures. Mr. R. A. Sterndale, F.Z.S., in his work on the "Mammalia of India," says that moles are not trapped in India, and that their destruction in this country is carried on in a spirit of ignorance. Macgillivray, an observant naturalist, regarded the mole as a useful animal. I think it was Frank Buckland who called attention to the fact that wherever moles have been the grass grows afterwards very luxuriously. Miss Ormerod and Sir Herbert Maxwell have also written to the same effect.

The Board of Agriculture publishes a leaflet on the habits and life history of the cockchafer, in which it is stated: "Moles and shrewmice feed upon cockchafers, and both of these animals should be protected."

Moles, instead of being farmer's foes, are really his friends; and we may yet see laws passed to save him from extermination at the hands of his senseless persecutors. "Certain it is that in the present depressed condition of agriculture" (to quote from an article in "The Nineteenth Century," by the Rev. Augustus Jessop) "it is difficult to estimate how much serious mischief is being done by the extermination of one of the farmer's best and most influential friends, the mole."—JOSEPH COLLINSON, 53, Chancery Lane, W.C.



Figs under Glass.

EARLY FORCED TREES IN POTS.—The trees may be placed outdoors when the wood is ripe, but they must not be so treated if there is any doubt about this, keeping them under glass, with a free circulation of air. These are matters in which the cultivator will need to exercise judgment. In either case encourage surface roots by dressings of manure and rough loam in equal parts, adding a sixth of old mortar rubbish, and a sprinkling of dissolved bones. See that those placed outdoors do not root from the base of the pots. Cut off all roots that have passed into the plunging material, top-dress, after which give a good watering, and they will only need water afterwards sufficient to keep the foliage in health. Where trees have to be bought orders should now be placed. The trees should have stems about a foot high, and well formed heads, with the growth fairly thin, and the wood ripened to the points of the shoots. The best varieties for early forcing are St. John's, Early Violet, White Ischia, and Brown Turkey.

EARLIEST PLANTED OUT TREES.—In the earliest houses the trees will now be ripening their wood, and watering may be discontinued, air being given very liberally. If, however, the second crop is not yet ripened moderate moisture in the soil will be necessary, with a free circulation of warm air to insure a high quality of the fruit. When the fruit is off cut out the growths not required for bearing or furnishing the trees, and take prompt measures against insects.

UNSATISFACTORY TREES.—Where the trees grow rampantly and produce their crops of fruit root-pruning should be resorted to, confining the roots to a narrow border of 3ft. to 4ft. width. A trench taken out at this distance from the stem after the fruit is gathered will check the tendency to a late growth, assist with ripening of the wood, more particularly if the growths are thinly disposed, and the points of the shoots, instead of being closely tied in, are allowed to grow up to the glass. If the drainage be defective it will be necessary to lift the trees in the autumn as soon as the leaves commence falling, and replant in fresh soil. Place in 9in to 12in of drainage, roughest at the bottom and smallest at the top, and on this lay 3in thickness of old mortar rubbish, freed of old laths and other pieces of wood, smashed and sifted with a $\frac{1}{2}$ in sieve, using that remaining in the sieve, the finer particles being used for mixing with the soil to the extent of one-sixth. A 3in drain must be provided below the drainage to carry off superfluous water. Turfy loam, inclined to be strong rather than light, forms a suitable compost, adding to it the one-sixth of old mortar rubbish before mentioned, and a bushel of ground coprolites to every cartload of loam. In replanting ram the compost, well incorporated, thoroughly about the roots, spreading them out evenly well up to the surface, and with soil between each layer, so as not to have all the leaves together. This will insure steady progressive growth, short-jointed, fruitful wood, a solidified compost duly supplied with nutritive elements securing, with judicious ventilation and management, solidified growth and large heavy fruit. Should the drainage be good it will only be necessary to detach the roots as advised, confine the roots to the narrow border, and remove some of the old soil from amongst the roots, supplying a top-dressing with the soil above stated.—GROWER.

Fruit Supply—Crops and Prices.

Plums and Damsons alike have failed all over the country with depressing unanimity. Just now the fair fields of Kent are yielding a beggarly but welcome harvest of Rivers' Prolifics and Kent Czars, both blue Plums, but varying very considerably in size, the last-named variety being the larger of the two. They are, however, only commanding the moderate price of from 6s. 6d. to 7s. per sieve of 24lbs, the demand being far from brisk on account of the price, which, compared with that of fruitful seasons is, of course, very high. There are Plums even dearer, baskets of big, luscious-looking, violet-tinted Plums from France realising from 10s. 6d. to 12s.

The budding Apples shared the fate of the Plums. Continental growers have been alive to the situation, and hence Italian Apples, with something of the high pink and olive complexion of the dark daughters of the country, are to be seen outshining, in appearance at least, the rather sour-looking, but much approved Keswick. The foreign supply is, however, not appreciable where big markets like Manchester are concerned, and so Apples, like all other fruit, are also dear, the price of

English fruit ranging from 18s. to 30s. per cwt. The Italian Apples are quoted at 5s. 6d. per basket of 22lbs. Italy is also supplementing the poor supply of Green Gages, and the wholesale dealers are asking about 8s. 6d. for baskets containing from 14lb to 16lb.

A few people may feel inclined to accept the Tomato as a substitute for fruit, and if so, they will be pleased to learn that this bright-hued vegetable is arriving in Manchester from Guernsey at the rate of about 4,000 baskets a day, and is being sold wholesale at the low price of from 3d. to 4d. per lb.

Fruit Crop in Blairgowrie District.

A record despatch of fruit in Blairgowrie district was made recently, when about 360 tons, mostly Raspberries, were railed. The record for one week last year was fully 250 tons, and the previous year fully 200 tons. The large increase this year is due to the greatly extended acreage under fruit cultivation. Growers are now realising that the crop is to be much shorter than expected, and some have been endeavouring to buy from others in order to prevent difficulties in the event of their being unable to complete their contracts. From two-thirds to three-fourths of the total Raspberry crop has now been railed, and picking will continue for at least a fortnight yet. The highest price realised so far is £43 per ton, free on rail. At this time last year they were selling at from £20 to £23 per ton. Strawberries are finished, except a few late varieties, which are being sent off in small lots. They can now command from £33 to £35 per ton, against £24 to £25 last year.

Fruit Crops in the Hexham District.

The season for the smaller bush fruits is rapidly drawing to a close, and has been one of the poorest for many years. Strawberries have been a fairly good yield, though the anticipations formed about a month ago have not been fully realised, this being doubtless owing to the want of warm, bright sunshine. Owing to the late frosts, Gooseberries, Raspberries, Black and Red Currants have been very disappointing in many instances, the yield being a very meagre one. In some gardens, where the Red Currant bushes were in sheltered places, the crop has been fully up to the average. In few years have Black Currants reached such a high price as this year, while another effect of the scarcity of fruit has been the enhanced demand for Rhubarb, which, along with such fruits as the Raspberry, makes excellent jam or jelly. Of the larger or tree fruits, Plums are almost an entire failure, and Apples and Pears are much below an average, though there are Apple trees of the later varieties well covered with fruit.

Fruit Famine in Cambridgeshire.

The general scarcity of home-grown fruit this year amounts to almost a famine in the famous Green Gage and Plum growing districts of south-west Cambridgeshire. So complete was the destruction of the crops by the spring frost that in some orchards there are absolutely none, while in others two or three on a tree is all that can be seen. Only two years ago, of Green Gages alone the consignments from the villages of Meldreth and Melbourn from the little station on the G.N.R., which serves the two villages, amounted on two days to 30 tons each, and one week's return was 140 tons of Gages from this small station. For the occupiers of small homesteads with orchards attached, of whom there are quite a number in the villages hereabouts, it is a serious loss indeed. In a fruitful year an orchard will pay nearly the whole year's rent of a homestead. But this year it will mean £100 rental for a house worth in itself £20, and no produce from the orchard. As a rule, orchard land which is fairly planted, will make about £10 an acre rent, which is a very good thing for the landlord, and also for the tenant in a good or even average year. The more enterprising growers who have land available for adding to their planting, adopt the expedient of planting Gooseberries or small fruit beneath the young Plum or Apple trees, and for a few years this is a source of profit. This year, owing to the famine in stone fruit, Gooseberries have made an exceptionally good price, and have made a half crop of this fruit worth about as much as a full crop of an ordinary season. But these growers may be counted on the fingers' ends, and in all the older homesteads there is no compensation whatever for a disastrous season. Apples and Pears are almost as bad as Plums. In one case in a village adjoining the centre of the Green Gage orchards referred to, a well-known grower of Apples estimates that in an orchard from which in a good year he gathers 2,000 bushels of Apples, he will this year only have about 10 bushels, or one Apple this year for every 200 in a good year. For the growers of stone fruit there is consolation in the fact that the fruitless trees are in a fine thriving condition, and are making rapid growth, and give promise of being in a good bearing condition for another year. Apples are, however, the exception to the rule, and do not look at all healthy. Fortunately for the manufacturers of jam, there has been a plentiful crop of Strawberries and a fair crop of Raspberries, and the consumer of fruit is not likely to suffer so much

from the bad season as the growers in particular districts where the cultivation is largely of one kind of fruit.—("East Anglian Daily Times.")

Book Notice.

The Wild Garden.*

Mr. Robinson observes that the term wild garden is somewhat misunderstood; and what it means is the use of hardy plants from abroad, naturalised and allowed to grow according to their nature without "culture," on banks, in woods, by streamlets, or in copses, which each form features of English estates. As the author advocates in print, so does he practise; and the charm of his own

the finest hardy flowers thrive much better in rough uncultivated places than they do in borders where the soil is forked and hoed. Secondly, they are seen to better effect amongst grass or in natural pieces of ground. Thirdly, their decay and passing away produces no disagreeable effects; and fourthly, the question of spring gardening is solved, and by naturalising, the minimum of labour is required. Indeed, mowing, except for shaven carpets of grass here and there, is a costly mistake. The question is asked, "Who would not rather see the waving grass with countless flowers than a close surface without a blossom?" Yet there are places where they boast of mowing forty acres!

While devoting his pages almost exclusively to hardy exotics, the author advises, as a matter of course, that the best British plants be secured and naturalised wherever these are wanting on an estate. In his own case he has introduced many subjects:



Clematis × *Countess of Onslow*. (See page 170.)

splendid garden in Sussex is due in a great measure to the naturalising of plants amongst the grass in all directions, plants like the Everlasting Pea, the Mulleins, the Montbretias, Heathers, Asters, Clematises, Rock Roses, Sumachs, Ceanothuses, and a host of beautifully effective subjects to which culture, as given to border plants, is unknown; and which thrive as grandly, or better, than they do in their own native homes. And what a charm they have in their abandon! Masses of Montbretias and Day Lilies covering a grassy bank like soldiers swarming on a hill, their own bright flowers but vying with the beauty of others around them. "The Wild Garden," therefore, is written to tell what can be used, how so, and to furnish examples in text and illustration.

The reasons in favour of wild gardening are that hundreds of

white Heather, water Forget-me-not, also the wood variety; Typhas and many other plants.

In dealing with the innumerable subjects suitable for wild gardening, he has found it best to classify all plants of the Globe-flower order (Ranunculaceæ), the Forget-me-not family (Boraginaceæ), Umbellifers, Composites, &c. Hardy exotic plants of other orders are treated in a chapter apart, each genus having its own merits discussed. In the matter of fences and boundaries there are pages of interesting records; while the qualities of British wild flowers and trees are emphasised and their employment urged. Plants for dry places for walls and ruins; and plants for bogs, streams, lakes, and meadows, copses, and uplands, are tabulated and written of in due order, the love for them, and experience of the author, contributing to lead one on in his interesting chapters, and thereby learn. The small engravings go a long way towards helping out the author's meaning and suggestions.

* "The Wild Garden," by Wm. Robinson. Illustrated by Arthur Parsons. Fifth edition. John Murray, London. Price 10s. 6d.

NOTES & NOTICES

Clematis × Countess of Onslow.

This pretty Clematis is the result of a cross between *C. coccinea*, and the variety Star of India, and was raised by Messrs. Jackman and Son, of Woking, who received a first-class certificate for it. Our engraving shows the form; and their colour is a rich reddish-purple, with bands of deep scarlet. The foliage resembles that of *C. coccinea*. It is quite hardy, a good grower, and of a climbing habit.

Home Counties Nature-Study Exhibition.

We are informed that the Home Counties Nature-Study Exhibition will be held, by kind permission, at the offices of the Civil Service Commission (formerly the buildings of the University of London), Burlington Gardens, London, W., from October 30 to November 3. Prospectuses, regulations, and prize lists may be obtained from Wilfred Mark Webb, Hon. Sec., 20, Hanover Square, N.

The Carnation League of America.

The Carnation League of America was formed to commemorate, annually, the life and works of William McKinley, and foster national patriotism. The same loyal impulse that prompted the stopping of almost all the wheels of industry for those few moments on the day of his burial has found annual expression in this simple tribute instituted by the Carnation League of America. That the Carnation was President McKinley's favourite flower, and was always found in his button-hole, is the reason for its choice as a league symbol, to be worn on each recurring 20th day of January, the anniversary of the late President's birth. The custom was first observed on January 29, 1903, with the greatest unanimity all over the country, and by Americans all over the world.—("American Gardening.")

Legal Notes—West Wycombe Horticultural Society.

His Honour Judge Warren, in Wycombe County Court, decided to whom belonged a balance of £180 in the hands of the treasurer of the West Wycombe Horticultural Society, which ceased operations two years ago rather than comply with the wishes of Sir Robert J. Dashwood, Lord of the Manor, who refused the use of his park for the annual flower show unless the beer tent was abolished. Mr. Thomas Martin, one of the members of the old society, sued Mr. S. Norman, the treasurer, by advice of counsel. Both plaintiff and defendant had engaged solicitors, who argued the case at considerable length. Since the old society ceased operations, a new society has been formed conforming to Sir Robert Dashwood's wishes. His Honour, having heard the arguments, decided that the sum in question should be equally divided among all who were either honorary or ordinary members of the old society at the date of the passing of the resolution winding it up.

School Gardens.

A Bill was issued a week ago which has been introduced by Mr. Jesse Collings, the object of which is to provide for the teaching in all public elementary schools of agricultural and horticultural subjects; to give facilities for nature study, and generally, by means of object lessons, to cultivate habits of observation and inquiry on the part of the pupils. To this end the Bill provides for school gardens, and such collection of examples and objects as may be necessary for the practical illustration and application of the instruction given. The education specified in the Bill, while optional in urban schools, is compulsory in all schools situate in rural and semi-rural districts. The measure includes instruction in fruit, flower, and vegetable growing; poultry and bee-keeping; budding, pruning, and grafting; cow and pig-keeping; milking; rotation of garden crops; nature and properties of soils; use of manures; knowledge and choice of seeds; structure, life, and food of plants; action of birds and insects on crops; choice and use of simple tools; and packing fruit, vegetables, and other produce for market.

Sundriesmen's Tent at Chiswick.

The Secretary of the Royal Horticultural Society requests us to state that the Council have consented to have a sundries tent at Chiswick on September 29 and 30 and October 1, in precisely the same way as they did at the last Holland House Show. Application for space should be made to Mr. Wright, R.H.S. Gardens, Chiswick, W.

Hop Growers.

A party of between twenty and thirty German Hop-growers at present on a visit to England reached Canterbury a week ago, and were welcomed by the Mayor (Sir G. Collard). The party returned with a number of English growers, who recently toured through the Alsatian and Bavarian Hop gardens. The visitors have inspected the Faversham neighbourhood and that of Rye, in Sussex.

Bulb Growing in Lincolnshire.

A correspondent informs us that Mr. T. Kime, of Mareham-le-Fen, Boston, Lincolnshire, is still very busy taking up his Tulips. He has now under cultivation nearly three acres, comprising a stock of about 600,000 bulbs of 130 different kinds. We have received samples of his single Tulips, White Swan and Couleur Cardinal, and we must say that never have we seen finer or better grown healthier bulbs. The Dutchman may beat us in growing Hyacinths, but he certainly cannot do better than we can in growing Tulips and Daffodils. Mr. Kime will this year take up 3,000,000 (three millions) of Daffodils or Narcissi, a good many of which are going to Holland.

Holloway's Protected.

In the recent action, Holloway v. Clent, Mr. Justice Swinfen Eady, in the Chancery Division, made perpetual an interim injunction recently granted by him restraining the defendant from using the name "Holloway" in connection with pills and ointment sold by him. At the first hearing of the case his lordship, in granting the injunction, remarked that on the facts alleged by the plaintiff, it appeared to be a case of "gross fraud." At the final hearing on July 29, his lordship was satisfied of the justice of the plaintiff's case, and therefore granted a perpetual injunction, with costs. Mr. Israel Davis appeared for the plaintiff; Mr. Jessel for the defendant. The successful party in this suit is, of course, Thomas Holloway, proprietor of the well-known Holloway's pills and ointment.

Giant Colonial Oranges.

The Orange supplies, which are particularly varied and abundant for the time of year, have had some welcome additions in the way of prime samples from South Australia and Jamaica. The mammoth Washington Navels have created quite a stir in the trade, for the fruit is so large that some of the cases only contain seventy-two fruits, and they sold at 18s. a package, or 3s. a dozen wholesale. This is a phenomenal price. Other varieties, with ninety-six, 120, and 150 to the case, sold at 14s. Without doubt these South Australian Navels are the finest Oranges ever put on Covent Garden Market. The Jamaican arrivals are good, but in no way comparable to the Australian fruit. With 150 and 200 to the case they sold from 10s. to 16s. each. These values are equal to those prevailing for choice Jaffa Oranges which are now on sale, and are satisfactory.—("Westminster Gazette.")

Doctoring Trees.

A new method of feeding trees and plants without the agency of the roots has been discovered by the well-known entomologist, M. S. A. Mokrshezki, who has explained his discovery in a lecture before the Imperial Botanical Society of India. He has invented an apparatus by which he can introduce into the stems of Apple and Pear trees salts of iron, either in the form of a solid or in solution. The effect of the chemicals is, on the one hand, completely to cure the tree of chlorose, and, on the other, to stimulate its growth in an important degree. Among other extensive researches the scientist has applied his theory to 800 fruit trees growing on the southern shore of the Crimea. By introducing dry sulphate of copper into the stems he produced an unusual development of the trees, as many photographs testified. M. Mokrshezki considers that in this way the size of a fruit tree can be increased, its colour improved and varied, and its diseases removed. The discovery opens up a wide field of practical utility, and is regarded as most important.

Abnormal Prices.

The subjoined table shows the high price of some of the fruit in season—mostly foreign—as compared with last year:—

	This Year.	Last Year.
Good Plums	8l. to 1s. per lb.	3d. to 8d.
Grapes	1s. to 1s. 9d.	6d. to 9d. per lb.
Ripe Pears	8d. to 1s. 3d. per lb.	5d. to 10d.
Bananas	1s. to 1s. 6d. doz.	1s. for 2 oz.
Apples	8d. to 10d. per lb.	3d. to 8d.

Failure of English Fruit.

There is no English fruit but such as has been grown under glass. Frost in May and rain during June have played havoc with the crops. Green Gages, which normally sell at five, six, or seven shillings a half bushel, are now bringing anything from ten to sixteen shillings. Red Gooseberries, which usually sell at two shillings a half bushel, can now fetch five or six shillings. English Black Currants are at a fabulous price. What there is of them in the market is going for fourteen shillings a half bushel, against an average price of six shillings; while Red Currants, which are very scarce, are worth six or seven shillings the half bushel, as against a normal three. As for good English Apples, some are now selling for four shillings a half bushel, for which in ordinary times no one would pay more than 1s. 6d. or two shillings. In the last fifty years, remarks the "Hackney Spectator," it is said there has been only one year so bad as this. Foreign importations, principally from Germany and the States, will make up the deficiency.

Scottish Fruit.

For some years the finest Potatoes in the English markets have been of Scotch growth. Scotch Potato values are always higher than English ones. So with forced Grapes. The finest Gros Colman grown in the United Kingdom for market come from Scotch forcing houses, and for ten years and more they have been unrivalled for size, colour, and quality. The same may be said of Tomatoes. It is only in recent years that the soft fruit growing industry has attracted unusual attention in the trade. This year there has been a phenomenal boom in Scotch Raspberries and Strawberries, and English dealers scoured the fruit districts in larger numbers than ever to obtain supplies. Only recently the output from the Blairgowrie district alone exceeded 200 tons. The quality of these berries must be good, as they are bought up by individual buyers in fifty and 100 ton lots even. Values for Strawberries ranged from £20 to £26 a ton. Raspberries made from £30 to £40, and it is rumoured that as much as £43 a ton has lately been given for these fruits. The present has been a record season, and, as the result, operations are to be extended during the next three or four months. In addition the pulping and jam making industries are to be developed by the Blairgowrie growers.

Foreign Fruit—Enormous Volume of Trade.

As the result of the failure of British fruit, observes "The Globe," the foreign shipper this season has got the trade entirely in his own hands. Immense shipments are coming in from the Continent. The receipt of Plums, Pears, Currants, and Cherries has been enormous. Over 80,000 packages of French fruit alone were put upon our markets during the past week. More than 60,000 came from Germany. About 25,000 bushels of Apples reached us in the same period from America, Spain, and Russia. As to Bilberries, over 45,000 packages of them arrived from Germany and Holland, and in the Midlands they have quite displaced the popular Black Currant. In six days sixteen steamers brought 124,000 packages from Spain, made up of Tomatoes, Melons, and Grapes chiefly. In addition large parcels of Plums and Pears arrived from Belgium, Holland, and Germany. Among the 10,000 boxes of fruit sent from California to Covent Garden were large quantities of fresh Plums and Pears, the latter competing chiefly with the supplies from France. Up to the present time over 1,000,000 packages of produce, chiefly fruit, have been exported to England from the Island of Guernsey alone. As some of these growers made as much as 10s. a dozen for their forced Peaches, 5s. and 10s. each for their early Melons, and 2s. 6d. a pound for their forced Grapes, the profitable nature of these import industries is apparent. The foreign fruit-growers are having a record season, and week by week are taking more money out of the country than they have ever done before. The trade in foreign fruit is becoming immense.

Fruit in Yorkshire

The marketings of fruit are extremely limited this season locally, the failure of orchard growths falling with peculiar hardship upon many cottage occupiers in the villages of the Riding, who have been wont to realise their rents and a trifle over from their summer and autumn sales. Bush fruit is scarce, and very far below an average crop; hence its dearth, and the prices of imported stone fruit are correspondingly high, and are likely to continue so, lacking home competition in the form of Plums and Apples. This will tell upon the poor, who will thus be unable to introduce fruit as largely as they have done in years of plenty into their daily dietary. The Plum growers of Worcestershire and places nearer London have no fruit to send, owing to the sharp frosts of the spring, and also to the strong winds, which destroyed all the blossom. These statements, says "The Eastern Morning News," are applicable to Yorkshire, and there are orchards in this Riding which have not a bushel of fruit in them.

Formaldehyde as a Fruit Preservative.

A Press despatch this week from Pasadena, Cal., says that fumigation of Citrus fruits with a preparation of formaldehyde, which was recently undertaken by Manager T. J. Ashby, of the Pasadena Lemon Growers' Association, has met with gratifying success. Eastern advices regarding the first shipment of fruit upon which the preparation was used state that nearly every box of fruit was in a splendid state of preservation when destination was reached, there being only five per cent. decay. There were also thirty-six boxes of Lemons in the same shipment upon which formaldehyde had not been used, and they showed a decay of twenty-five per cent. The success of these experiments has been so pronounced that they have attracted the attention of fruit men all over the country. The Agricultural Department of the United States Government has also become interested in them, and has written to Manager Ashby asking him to furnish the Government with full information concerning the methods pursued and the exact gain over the other means in general use to attain the same end.—("Fruitman's Guide.")

Isle of Wight Horticultural Association.

A Sweet Pea show was held under the auspices of the above association at the Drill Hall, Newport, on July 31. Unfortunately the elements possessed such a potential influence in aiding success or failure, that for a week previously they warred against us. Five hundred vases of Sweet Peas had been promised us by intended exhibitors, but we had perforce to content ourselves with less than 200 staged, all of which bore evidence of violent storms and tempests. The twelve vases less injured were sent in by D. and G. E. Drabble, Esqs., Los Altos, Sandown (gardener, Mr. Niblett). The Rev. Knight Smith exhibited vases of the new pink variety, Countess Spencer. Messrs. Peed and Sons, of West Norwood, staged fifty good named varieties, and those staged by R. Roach Pittis, Esq., and Dr. Shaw, were fairly good. In the amateurs' class Messrs. Miller and Watson were most creditable.

Chief amongst miscellaneous subjects were three dozen really superbly grown and flowered Gloxinias, exhibited by Dr. Shaw (Asylum Gardens). There was staged by Mr. M. Prichard a beautiful and extensive collection of hardy perennials and alpine plants, many of them new and rare, from his nurseries at Christchurch, Hants; also grand Gladioli Madame Hulbot, deep purple shade, worthy extensive cultivation, these having long had a big reputation for this class of plant. Mr. E. Cave staged a clean, healthy lot of stove and greenhouse plants. The above three exhibits formed perhaps the most prominent features of the show. Messrs. D. and G. E. Drabble sent in good Muscat Grapes and collection of cut flowers, including a fine lot of types of Gloxinias; Dr. Shaw, cooking Apples; Col. Pearson Crozier, superb stands of Carnations and Picotees; Mr. W. Tee, Newport, staged beautiful stands of the former. Ferns were admirably shown by R. Roach Pittis, Esq.; flowering and foliage plants by Mr. Parsons; and Begonias by Mr. Dyer. The judging was in the capable hands of the Rev. Knight Smith, Meonstoke, Hants, and Mr. E. C. Goble, Ryde Nurseries. The rev. gentleman subsequently read a most instructive paper on Sweet Peas and their culture. The secretarial work was carried out by Messrs. Triblick and Kime.

Shrewsbury Floral Fête.

Those who won any of the leading prizes this year at this renowned annual fête, thoroughly deserve what praise and credit these can bring; for a less encouraging year is not within our immediate ken. Yet with modern skill and appliances, cultivators are able year after year to send of the best in all departments, and send it liberally.

The show, from general observation, seemed well up to the high standard of previous years, and there was a great freshness about the floral displays, which were extensive. All sides of garden produce are of the choicest at Shrewsbury, and the exhibition must be of great educational value to gardeners from all parts of the country, though somewhat bewildering to the uninitiated.

Thanks to the forethought and the vigilance of the committee and the hon secretaries, Messrs. Adnitt and Naunton, the items of the exhibits were duly in order, and caused to be named for everybody's benefit.

Fruit, especially Grapes, was good, the great class for the latter exciting the keenest interest from all parties. Mr. Goodacre led, and Messrs. Buchanan came second.

Specimen plants were very handsome; Sweet Peas had a whole tent; Roses and Dahlias were in fair quantities. What our reporter of the floral artistic designs has to say of them may be taken as authoritative, he being a noted florist.

Vegetables were good all through, and the noted exhibitors of collections were again testing their respective abilities as cultivators and stagers of produce.

In concluding these introductory remarks, we would point out that this report has to be very hurriedly secured; therefore, if any exhibit is omitted, we trust that such error of omission will be condoned as purely the result of exceptional circumstances. The weather was of the finest, with sunshine and breezes, on Wednesday, and large numbers of visitors were early into the grounds. Many were from London, and some from Edinburgh.

Plants and Groups.

The specimen plants at this show are always one of the leading features, and on this occasion they were fully up to the average. The premier class for fifteen stove and greenhouse plants, not less than ten in bloom, brought out three competitors, forming a huge show in themselves. Messrs. Cypher and Sons, Cheltenham, proved the victors, with *Kentia Belmoreana*, *Bougainvillea Cypheri*, a superb plant of *Statice intermedia*, *Ixora Duffi*, *Erica Marnockiana*, *Stephanotis floribunda*, *Croton Warreni*, *Croton Sunset*, a grand plant of *Phoenix rupicola*, *Statice profusa*, *Allamanda grandiflora*, and *Bougainvillea Sanderiana*; a superb collection right through.

Mr. W. Vause, Leamington, was second, with rather weaker plants, the Crotons lacking in colour. His best plants were *Ixora Fraseri*, *Bougainvillea Sanderiana*, *Croton Queen Victoria*, and *Clerodendron Balfouri*. Mr. W. Finch, Coventry, was third. Throughout the show artistic taste seems to prevail, except in this class, where most of the huge specimens were staged on a scaffolding of beer-barrels, some having no less than five to support them, with rough deal quartering, and various other primitive props, and this, too, with art muslin at a penny per yard. Wake up, Shrewsbury!

For six stove and greenhouse plants in bloom or foliage there were four competitors. The first prize was well won by Mr. B. Cromwell, gardener to T. Sutton Timmis, Esq., Allerton, who staged a grand plant of *Ixora Duffi*, covered with flowers and in perfect health, *Statice profusa*, *Stephanotis floribunda*, *Lapageria rosea* (grand), *Ixora Williamsi*, and *Kentia Fosteriana*. Messrs. Cypher and Sons followed with fine *Statice profusa* and *intermedia*, splendidly flowered, and *Ixora Pilgrimi*; while Mr. W. Vause brought up the rear with weaker plants.

The groups were simply splendid, and in the allotted space of 300 square feet the exhibitors could do themselves justice. There were three exhibitors, and all worth a first prize. However, Mr. W. Finch was placed first by the judges, with a series of mounds with dot plants of *Cocos Weddelliana*, *Humea elegans*, Bamboos, and other foliage plants. The flowering plants were chiefly *Liliums*, *Paneratiums*, *Ixoras*, *Orchids* in variety, and *Begonia Gloire de Lorraine*. The arrangement was light and effective. Messrs. Cypher and Sons followed closely; in fact, most people disagreed with the judges. Their arrangement was similar to the former, except that more *Orchids* were used. The front of the group was a blaze of colour, artistically blended and grouped. The *Ixoras*, too, were used tastefully, as were all the foliage plants. Mr. W. Vause came third with a pretty group, though less telling than its compeers.

A group of ornamental foliage plants for effect in a similar space was well represented, there being four entries, and a brave show they made, too, Messrs. Cypher and Sons winning with a handsome arrangement. The Crotons, *Aralias*, and Ferns were perfect in colouring, while the groundwork was well arranged.

Mr. J. Thompson, Derby, made a good second, his Crotons were well coloured and nicely displayed, though the general effect was not so good. Mr. J. Read, gardener to the Earl of Carnarvon, Burton on Trent, made a good third.

For thirty stove and greenhouse plants in pots, not exceeding 10in in diameter, and not less than twelve in flower, there were three competitors, a very strong class, and difficult to judge. Mr. J. Lambert, gardener to Lord Harlech, Oswestry, was awarded first position. A few of his best plants were *Ixora Pilgrimi*, *Ixora Duffi*, *Clerodendron Balfouri*, *Dracæna Shepherdii*, *D. Baptisti*, *D. Godseffiana*, and Crotons were all good. Mr. B. Cromwell was a capital second, having *Ixora Duffi*, *I. coccinea superba*, *Gloriosa superba*, and a few good Crotons. Messrs. Cypher were third with neat plants.

There was a capital competition for a single specimen stove or greenhouse plant in flower, no less than five staging. Mr. W. Vause led with a good specimen of *Erica æmula*. Mr. W. Finch followed with a superb plant of *Ixora Westi*, while Messrs. Cypher brought up the rear with a *Stephanotis*.

For four exotic Ferns there were five entries, but the competition was not very keen. Mr. B. Cromwell won first with plenty in hand. His plants were *Davallia fijiensis* (a grand specimen), *Nephrolepis rufescens*, *Microlepia hirta cristata* (a monster in good condition), and *Adiantum cuneatum*. Mr. Stevenson, gardener to Mrs. J. H. Slaney, Sunnycroft, Wellington, followed with weaker plants, and Mr. J. Carter, gardener to W. J. Scott, Esq., Bedford House, third.

For six *Dracænas* there were three entries, Mr. T. Lambert taking first place with good plants of *D. amabilis*, *D. Lord Wolseley*, and *D. Baptisti*. Mr. R. Lawley being third.

Tuberous *Begonias*, six plants, were good, though somewhat uneven, Messrs. Blackmore and Langdon gaining an easy first prize with large, handsome plants. Messrs. B. R. Davis and Sons made a good second. The third prize was not awarded.

For twelve *Gloxinias* Mr. R. Lawley, gardener to Mrs. R. Darby, Adcote Hall, was awarded first prize with good plants, Mr. A. Jones being second with good fresh stuff, and Mr. J. Carter third.

There were three groups of tuberous *Begonias* staged, and superb they were too. Mr. F. Davis, Woolashill, near Pershore, led off with a splendid exhibit, the blooms were perfect in colour and freshness. Messrs. Blackmore and Langdon were second with an equally creditable display, while Messrs. B. R. Davis and Son, Yeovil, were third, making the competition very warm.

There were again three entries for twelve table plants, Mr. B. Cromwell being to the fore with well coloured Crotons and Cocos. Mr. A. H. Hall, gardener to J. C. Waterhouse, Esq., Macclesfield, second, and Mr. Alex. Home third, with a remarkable collection.

The thirty miscellaneous plants made a good show. Mr. T. Lambert was first with some pretty *Ixoras* and Crotons; Mr. B. Cromwell came second with a bright display, and Mr. J. Carter third.

In the class for a group of plants arranged for effect in a space of one hundred square feet, confined to the county of Salop, Mr. W. Phillips, gardener to T. F. Kynnersley, Esq., Leighton Hall, won well with a light and graceful group, the Palms and Crotons being most effective. Mr. W. Roberts, gardener to Mrs. Swann, Halston Hall, was a first rate second, though rather heavier in build. Mr. S. Bremmell, gardener to H. H. F. Hayhurst, Esq., Wellington came third.

The stove and greenhouse plants were represented in this section by six plants, Mr. T. Lambert winning with nice plants of *Clerodendron fallax*, *Statice profusa*, *Kentia Fosteriana*, *Croton Evansiana*, and *Ixora Pilgrimi*. Mr. Jones followed, and Mr. W. Roberts made a good third. The next class was similar to the last, except that four plants must be in flower; here Mr. J. Carter was easily first prizewinner. Mr. W. Ashwood was a weaker second, and Mr. E. Cliff third.

Floral Decorations.

These were a wonderfully attractive feature. The exhibits were very numerous, and on the whole most beautiful, the display of bouquets being probably the finest ever exhibited at any show, and displaying a prodigality of beauty which many bouquetists might envy, but few possess. Messrs. Perkins and Son and Messrs. Jenkinson were both in great form, and largely divided the chief honours. For bride's bouquet, Messrs. Jenkinson were awarded first prize with largely *Odontoglossum Alexandræ*, a massive, beautiful bouquet, but a bit heavy. Messrs. Perkins and Son were placed second with a most elegant bouquet, chiefly *Alexandræ* with *Paneratiums*, *Masdevallias*, *Lily*, &c., a marvel of beauty, and would certainly have been first if the judging had been left to public taste. For bridesmaid's bouquet, Messrs. Jenkinson were again first with a large, handsome bouquet of purple *Dendrobies*, *Alexandræ*, *Oncidiums*, &c.

Here Messrs. Perkins were again unaccountably second with a most charming arrangement of similar flowers, in elegance, finish, and workmanship. They were clearly ahead. Third

went to Messrs Jones and Sons, Shrewsbury. For ball bouquet there were six competitors, the first prize in this case going deservedly to Messrs. Perkins; second to Messrs. Jenkinson and Sons, and third to Mr. Treseder, Cardiff; fourth specially awarded to Messrs. Pope and Sons, Birmingham. For ball and bridal bouquets, Messrs. Perkins got first award with very handsome arrangements in Carnations—one pure white and the other shades of pink; second, Messrs. Jenkinson and Sons.

For shower bouquets of Cactus Dahlias Pope and Sons led with a very handsome arrangement in pink and primrose shades; second, Mr. Treseder, Cardiff. For feather weight bouquet, Messrs. Perkins were first with a most elegant arrangement of Odontoglossums, Masdavallias, and Oneidiums; second, Messrs. Jones and Sons; third, Messrs. Jenkinson and Sons.

The display of designs was not large, and, except in one or two cases, not specially attractive. For Harp, Messrs. Jenkinson and Sons, and Messrs. Perkins and Sons were first and second respectively. For Cross, Messrs. Perkins were first with a very beautifully executed arrangement with groundwork of white Asters, lightly sprayed with Alexandras, Cattleyas, and elegant green; second, Messrs. Jones and Sons. Messrs. Pope missed second place by allowing their greenery to exceed size. For Wreath, O. Robinson, Esq., Adderley Lodge, Cheshire, got first award with a large many-coloured, rather rough arrangement. Mr. Treseder was second. For any other design, Messrs. Pope and Sons were first with a handsome, but rather heavy, anchor; second, Messrs. Jones and Sons.

There was a large display of baskets, which made a very attractive exhibit. For basket for drawing-room Messrs. Jones were first with a very large, handsome arrangement; Messrs. Pope and Sons, second. For baskets for hand (Orchids excluded) Messrs. Perkins were first with a very handsome arrangement of Carnations and Lily; second, Mr. Treseder, Cardiff. For stand of cut flowers, excluding Orchids, Mr. Robinson was deservedly first with *Pancretiums*, *Begonias*, *Gloriosa superba*, &c.; second, Messrs. Jones and Sons; and third, Messrs. Jenkinson. For buttonholes and ladies' sprays, Messrs. Perkins were first with a beautiful arrangements in Orchids; second, Mr. Treseder.

In classes from 41 to 45 the prizes offered were for table decorations, open to ladies and amateurs, who made a very first-rate show. For epergne and two baskets, Miss Mary Morgan gained first award with a fairly good arrangement of Sweet Peas and Carnations, with Grasses and *Gypsophila*; second, Mr. J. Cook, Shrewsbury. In class 42, for an arrangement of cut flowers to occupy four feet space, Miss M. Morgan was again first; second, Miss Mary Allen, with Tea Roses and Carnations. In class 43, for arrangement of cut Roses, to occupy four feet, Miss Evans, Bilton, was first with a slightly heavy arrangement; second, Miss Bates, Wem.

For dinner-table arrangement of Sweet Peas there were no fewer than eleven competitors, all ladies, and the display was very charming. First prize was awarded to Miss Lashmore, Market Drayton, with a very light arrangement of pale pink Peas with Grasses and *Gypsophila* and sprays of *Ampelopsis*; second, Miss Morgan, with pink and mauve; third, Mrs. G. E. Colin, Ludlow, also pink and mauve, but very light and beautiful.

Dessert Table, Class 76.

The large dessert table, decorated with plants and cut flowers, and measuring 10ft by 4½ft, is one of the chief features of Shrewsbury summer show. The competition is usually keen, and each exhibitor is of the foremost rank as a fruit-culturist and decorator. There are fifteen dishes, selected from the schedule list, epergnes, vases, plates, &c., having to be supplied by the exhibitors themselves.

On this occasion the order of prizewinners was—First, the Earl of Harrington (gardener, Mr. J. H. Goodacre), Elvaston Castle, Derby; second, G. Farquhar, Esq. (gardener, Mr. G. Mullins), Eastnor Castle; and third, Hon. Mrs. Meynell Ingram (gardener, Mr. R. Dawes), Temple Newsam, Leeds, there being just three tables. Mr. Goodacre's contribution had the following, with the points received.

Vars.	Points obtained.	Max. available for each dish.
2. Apples (Washington and Ribston ..	6½ each	7
2. Apricots	None	6
2. Cherries	None	5
1. Figs (Turkey)	5	7
4. Grapes (Muscat of Alexandria and another)	5 and 7½	10
(Madresfield Court and Black Hambro')	6½ and 8	
2. Melon (Hero of Lockinge and a Seedling)	7 and 6	8
2. Nectarines (Pine-apple and Elruge)	7½ and 6	8
2. Peaches (Bellegarde and Princess)	6½ each	8
2. Pears (Jules Guyot and Margaret Murillat)	6½ each	7
1. Plum	None	6
1. Strawberries	None	6

For decoration the points were:—

Beauty of flower and foliage	6½	8
Harmonious blending of colours	7½	10
General arrangement for effect	8	10

Total 118½ points

All the fruits were excellent here, particularly good the Pears, Peaches, Nectarines, Melons, and black Grapes. In this first

table the flowers used were *Francoa* and *Cheronia* with Grasses, and Mr. Goodacre had much the lighter and sweeter arrangement. The decorations, however, have been better in former years.

Mr. Mullins (107 points) had fine Bigarreau Napoleon Cherries, a fair Royalty Melon, beautiful Apples, Gages, Nectarines and Peaches, the Pears not being so finished as in Mr. Goodacre's table. His Gros Maroc Grapes were as fine as could be, and on the side facing the wire-netting were Foster's Seedling in fair form. Mr. Dawes (97 points) had two splendid Madresfield Court bunches, long, shapely, and well finished. The Kirk's Plums were large and very handsome, as were the Dymond Peaches, Elruge Nectarines, and Figs. The decorations were quite too heavy.

Champion Grape Class.

Every active-minded gardener knows the importance of this great class. The Grapes shown herein are the choicest within these islands, which are moreover famed as producing the best samples in the world. Class 77 demands twelve bunches, in four or more distinct varieties, but not more than four bunches of any one variety, the premier award being a magnificent silver champion eup valued at fifty guineas. Along with this goes £20 in cash; the second prize being £16; the third £12, and so on. Three prizes are also awarded in this class for decorative arrangement. It will be remembered that Mr. Shingler, gardener to Lord Hastings, won the leading position last year, being his second win and possession of the eup, so that he only need win again to become owner for ever.

This time, however, he was third, the lead being taken by the Earl of Harrington (gardener, Mr. J. H. Goodacre) with Grapes of very high quality, the highest points last year being 109½, while this time the maximum is 115½. Of course the standard of pointing for black Grapes has been raised since last year, which might account for some of the difference, but it is surely very satisfactory to be presented with such excellent fruit. For the third time in succession, the Messrs. Buchanan, of Kippen Vineyards, came second, and we trust their efforts may yet be crowned with higher success. This year they were only two points behind the first prizewinner, having 113½.

We give a table showing the varieties staged, and the points gained by Mr. Goodacre.

1. Black Hambro'	obtained 9	out of 10
2. Madresfield Court	10	11
3. Muscat of Alexandria	9	11
4. "	10	11
5. "	8	11
6. Muscat Hambro'	10½	11
7. "	11	11
8. Muscat of Alexandria	9	11
9. Madresfield Court	10½	11
10. Black Hambro'	9½	10
11. Muscat of Alexandria	8½	11
12. Muscat Hambro'	10½	11
Total	115½	

Messrs. D. and W. Buchanan, of Kippen, Stirling, only lost half a point on their Muscats, and had seven possibles. The bunches were very massive and grandly finished, and those who were judges of Grapes whistled with surprise when they saw how close the competition ran. The blacks here were Alnwick Seedling, Cooper's Black (not considered of such high quality as varieties as Madresfield Court, therefore points are lost), and the whites were all Muscat of Alexandria.

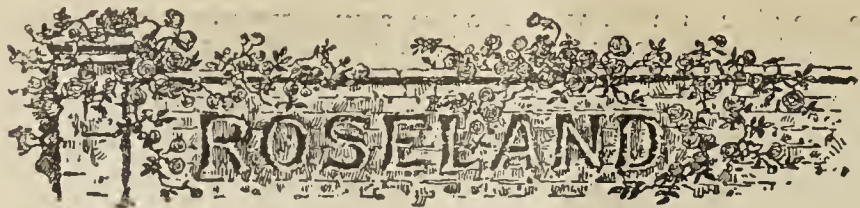
Lord Hastings (gardener, Mr. W. Shingler), Melton Constable Hall, had 107½ points, with great weighty Alnwick Seedlings and grand Madresfields, and altogether these were of a very high standard. Fourth came Colonel Platt, C.B. (gardener, Mr. W. A. Coates), Gorddino, whose Grapes were somewhat behind, and received a total of 105½ points. Two of the Black Hambro' bunches, however, were all but perfection, and he won first for table decorations. Separate prizes are awarded for decorations apart from the fruit. Second for this phase came Mr. R. Dawes (who was fifth for the Grapes); third, Mr. Goodacre. There were five entries.

Sixteen Dishes of Fruit.

These sixteen dishes, in not less than a dozen kinds, nor more than two varieties of each, in a space 8ft by 4½ft, brought forward three competitors. Each collection is decorated, and prizes awarded for effect. Mr. J. H. Goodacre was again foremost with excellent fruit of all sorts, including fine dishes of Turkey Apricot, Morello Cherries, Transparent Gages, Royal Sovereign Strawberries, Grapes, &c., and second for decoration. Mr. J. Dawes, Ledbury Park, was second (for fruit) with magnificent Sea Eagle Peaches and other good dishes, being third for his decorations; while third for the fruit collection, but first for decorative effect, came Mr. Jordan, of Impney, his fruits being thoroughly well ripened and of very high quality, the Grapes alone falling back.

COLLECTION OF TWELVE DISHES.—The first prize—a £10 note—for a dozen dishes in not less than nine kinds, without Pines, space 6ft by 4½ft, fell to Mr. R. Dawes, of Temple Newsam, with

(Continued on page 176).



Notes on Roses.

It cannot be said the present has been an ideal season for Roses, especially of late. The recent continuous showery weather, accompanied with a low temperature, has all tended to premature decay of the blossoms. The larger H.P. and Tea varieties have suffered the most in that respect. It is for these reasons that I wish still further to advance the claims of so many varieties known as "garden" Roses, which are really so valuable where cutting for home use and the beautifying of the garden itself is the main cause of Rose culture. It cannot be said that garden Roses are not fitted for exhibition either, as no section commands more interest at shows than does this. Arranged loosely in good-sized bunches, accompanied, as they should be, with buds and their own foliage, they make a brave bid for popularity, and obtain it, too.

Now is a good time to make a note on the approved varieties, so that intending planters may have an opportunity of making a selection and placing their orders with advantage. It is but reasonable that those who take the trouble to order early get the best plants, and another point which I wish to emphasise is that of early planting. Roses are so unlike some other trees and shrubs. While many of the latter do not make autumnal roots, Roses do quite freely, which no doubt is a distinct gain for the future welfare of the plants. Garden Roses, like all other occupants of the garden, are becoming very numerous, so much so, that to the beginner the making of a selection in a limited way is a difficult matter. I therefore purpose to give a brief selection of what I know from experience are quite amongst the cream in their respective sections.

SINGLE FLOWERED VARIETIES.—Una is quite the best amongst many of white flowered sorts. The pure white, waxy looking petals make up a flower fully 5in in diameter. The yellow anthers, too, aid in beautifying the flower. The habit of growth is vigorous, producing strong sucker-like shoots, which produce abundance of its charming blooms. For a pole in a shrubby border, or on grass, this variety is quite one of the best. Electra belongs to the same type as the former, but is quite eclipsed by it. Those who like a single flowered Rose of a yellowy white colour will find in this a capital variety. The growth is strong, and its flowers are produced quite freely. The foliage is dense and lasting, which for garden decoration is desirable.

The Lion is a distinct improvement upon Carmine Pillar, which is saying a good deal, as this Rose has long been looked upon as the best of high coloured varieties. The newcomer is more intense in its colouring, and, if anything, flowers more abundantly; while in its manner of growth little is left to be desired. Dawn is another of the large blossomed type, the growth upright, vigorous, but perhaps a little stiff in appearance. The flowers are of full size, rosy pink, overlaid with silver.

Leuchtstern produces its flowers in great profusion in huge trusses. The colour is its great charm, being quite unique, deep rose pink, with a white eye. Growing out of doors the colour is so much intensified as compared to that when growing under glass. As a Rose for a pole this variety is unsurpassed. Euphrosyne for a pergola is quite a gem. The growth is so exceptionally free and pendant that a strong plant quickly covers much space. It is one of the earliest to open its pink flowers, which are borne in lengthened trusses or racemes. This is not strictly a single flowered variety, the earlier blossoms being semi-double. Brunonis for a pole or pillar is a charming variety, enhanced as it is by its glaucous foliage. The growth is free, erect, and produces huge trusses of the purest white blooms, emphasised as they are by the yellow stamens.

Moschata alba produces its large single blossoms quite freely. The petals are broad, white, faintly tinted with the palest pink. It is a vigorous climbing species that should find a place in every garden. Macrantha, although not one of the most vigorous in habit, is a strong grower. The great charm of this variety is its huge white blossoms, set off so by the yellow stamens.

Bardou Job has two rows of petals as a rule. It is a capital sort for filling a small bed, as it can be annually pruned quite low with success. The blossoming period lasts over a long season, as with every bit of new growth flowers are produced. The colour is intense bright crimson, overlaid with a velvety sheen.

Irish Beauty, Irish Glory, and Irish Modesty cannot be omitted, as they all three possess so much merit. The first is pure white, with yellow stamens. The second is marbled pink, and the latter coral pink suffused with ecru.

Wichuraiana is a type of Rose that is destined to become popular. The bulk of the varieties are evergreen, which is a step in the right direction. Pink Roamer is a single flowered variety, quite free in its method of flowering. Paul's Single White, treated as a H.P. in the matter of pruning, is a magnificent variety to plant in a mass. Its pure white flowers are borne in profusion, and are much enhanced by its deep green leaves and yellow anthers. Hebe's Lip, with its Picotee edging of purple on a white ground, is so exceedingly pretty that it cannot well be dispensed with.—E. MOLYNEUX.

(To be continued.)

Propagating Roses by Cuttings.

The life of a Rose tree, be it bush or standard, is always somewhat uncertain, and where large quantities are grown many young plants are required each year to fill up gaps. All growers should, therefore, insert a few cuttings each year. The advantages of having dwarfs on their own roots are well known, and, excepting the cases of weak growers, succeed quite as well in other respects, when propagated by cuttings as by budding. August is an excellent month during which to insert cuttings, especially in the case of Teas. They can be rooted in the open air, but I prefer to place them under glass, and to keep them there till the following spring, because young plants are much more liable to injury by frost than older ones.

In regard to soil, a mixture of three parts of good loam and one part leaf soil, with sharp sand added, answers admirably. Select short jointed cuttings of either ripe or half-ripened wood, cut them from the parent plant with a heel attached when possible, and insert them round the sides of 5in and 6in pots, which have been well drained, and filled with the prepared compost. The soil should, of course, be pressed firmly. Cuttings with from five to eight joints answer well, and these should usually be sunk into the soil about half their depth. Give one thorough watering through a rose, and place the pots in a cold frame or handlight. Shade regularly for a time, and give no air, but sprinkle the cuttings once or twice daily during bright weather, and water the soil through a rose when it becomes fairly dry.

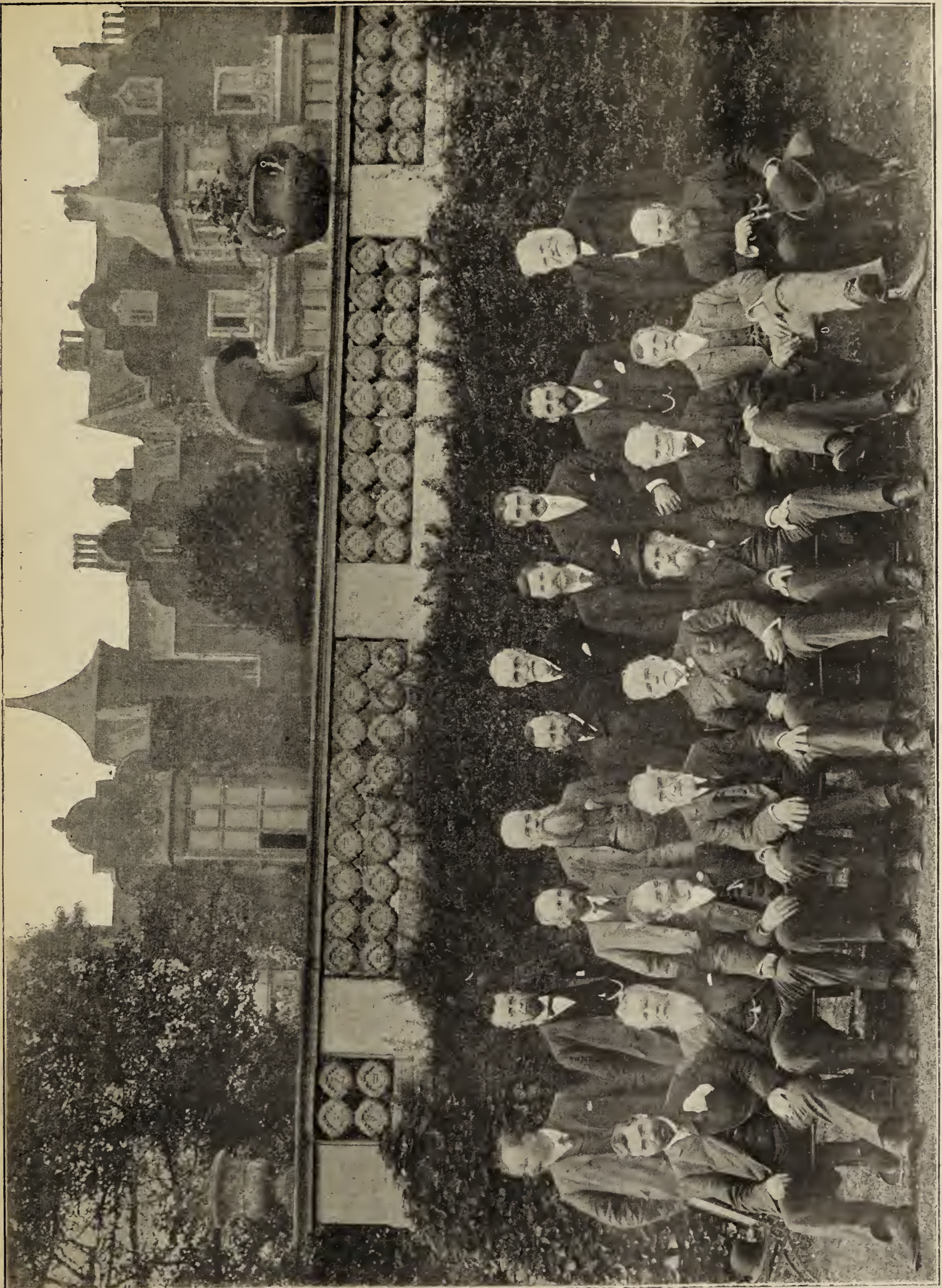
With such treatment 80 per cent. of the cuttings shoot root. When growth commences admit air gradually, and as soon as the cuttings are well rooted pot them into 4in or 5in pots according to their strength. Keep rather close again for a time, then gradually admit more air as growth advances. When the frosts of autumn come give just sufficient protection to prevent injury. The following May plant in nursery beds in the open air, and six or nine months later they will be ready for lifting and planting in permanent positions.

Cuttings of Hybrid Perpetuals, and other hardy kinds should be inserted in the open air. This may be done with every prospect of success from the present time till the end of November. October, however, I consider to be the best month in the whole year for carrying out such work. Select a piece of well-worked friable soil, and after having fixed the line in position, throw the soil back with a spade so as to leave a trench 3in or 4in in depth. In this insert the cuttings 3in apart, return the soil, and tread very firmly. Arrange the rows a foot apart. If this work is done now, the cuttings will need regular attention in regard to watering for some time, but when they are inserted during the autumn months one watering usually suffices. The autumn cuttings should be left undisturbed for a year, and then transplanted 1ft apart, but those inserted now should be transplanted next spring, and by the following autumn they should make nice little bushes.—H. D.

Gardeners' Dinner Committee.

It is proposed to have a great gathering of gardeners during the autumn to dine together in London on the occasion of the great exhibition of British-grown fruits and vegetables at Chiswick, which takes place from September 29 to October 1 inclusive. The dinner will be held on the evening of the first day at the Holborn Restaurant. The carrying out of this intention has been entrusted to a committee of twenty. Nineteen of these, by arrangement met at the Holland House Show, and were photographed by Mr. J. Gregory, of Croydon, the other being unable to be present.

Circulars to the number of 800 have been issued to gardeners in all parts of the country, and 90 per cent. of the replies to these were favourable, so that we shall expect a very important and interesting meeting of gardeners next month. We give the names of those who met at Holland House, so that our readers may see that a wide interest is being taken in the meeting, and that the gathering will consist chiefly of gardeners, for the purpose of enabling those from a wide area of country to meet on a common platform and dine under one roof. Mr. Alex. Dean, of 62, Richmond Road, Kingston, and Mr. Edwin Beckett, Aldenham House Gardens, Elstree, Herts, are joint hon. secretaries. Mr. Owen Thomas, 25, Waldeck Road, Ealing, W., is chairman of committee; Mr. Leopold de Rothschild will preside at the dinner.



J. F. MCLEOD, H. MARKHAM, C. R. FIELDEN, GEO. NORMAN, G. REYNOLDS, J. SMITH, G. KELF, J. GIBSON, E. BECKETT (Hon. Sec.), C. JEFFERIES, JENNINGS.
 GEO. WOODWARD, W. FIFE, C. DINON, A. DEAN (Hon. Sec.), OWEN THOMAS (Chairman), J. HUDSON, J. WILLARD, W. HOWE.

Gardeners' Dinner Committee.

Shrewsbury Floral Fête.

(Continued from page 173).

a high-class all-round set, particularly his Melons and Kirk's Plums. Mr. J. Jones, of York House, Malvern, was second, his Grapes being excellent. The decorative order here was Mr. J. Jones first, Mr. R. Dawes second.

COLLECTION OF NINE DISHES.—This, the eightieth class, was open to growers in the county of Salop only. The chief award, £5, was given by the president, the Right Hon. Lord Forester. Mr. C. Wilkins, of Ellesmere, led, being second in his decorations. Mr. J. Langley followed next; third, Mr. Bremmell, of Wellington (first for decorations); and fourth, Mr. C. Roberts, Halston Hall, being third in decorations.

Four bunches of Grapes, two blacks and two whites, prizes £6, £4, and £3. The bunches were good in the leading exhibits, and competition throughout was keen. Mr. J. Lambert beat Mr. R. Richardson, and third Mr. C. Wilkins.

Single bunch of Black Hamburgh. J. H. Goodacre, J. Langley, Tedsmore Hall, and C. Bannerman as here named.

Two bunches of Madresfield Court. W. Shingler, J. H. Goodacre, and J. Langley in this order.

Alicantes, two bunches. W. Shingler, first; A. H. Hall, second.

Gros Colman or Gros Maroc, two bunches. W. Shingler, J. H. Goodacre, and G. Davies.

White Muscats. F. W. Everett, Tal-y-Cafn, having a grand bunch, quite 7lb in weight, well modelled and finished. Second, Mr. A. Richardson, Llanfairfechan; third, J. W. Goodacre.

Single bunch of White Muscats. Messrs. Buchanan, Kippen; A. F. Hall, Prestbury; 3, J. H. Goodacre; the competition being keen.

Two bunches of white Grapes, any other sort. A. H. Hall; A. W. Coates, Gorddinnog; F. W. Kerr, Chorley, Lanes.

Diamond Jubilee Grape, one bunch. F. Jordan, Impney Hall, first; J. H. Goodacre, second; and A. H. Hall, third.

Black Hambros, open to Salop only. Mr. T. Lambert, Brogyntyn; J. Langley; and C. Wilkins, Oteley, Ellesmere.

Two bunches black Grapes, any other variety, open to Salop only. Mr. T. Lambert; J. Langley, Tedsmore Hall; G. Davies, Frankton, out of seven entries.

White Muscats, Salop only. Mr. T. Lambert, Brogyntyn; J. Mills; S. Bremmell, Oswestry.

Any other white Grape, Salop only. Mr. J. Mills, Market Drayton; E. P. Thompson; W. Ashwood; there being five contestants.

Two bunches black Grapes (class 95). Messrs. W. Ashwood and W. Evans, in this order.

Two bunches white Grapes. Mr. W. Ashwood, Admaston; A. Jones, Oaklands.

Six Peaches. Mr. R. Greenrod, Whitefield, Hereford; R. Davies; F. Jordan, Impney.

Six Nectarines. Mr. W. Pilgrim, Anglesey; G. Lilley, Gaddesby Hall, Leicester; and F. Jordan.

Six Apricots. Major Clive, with Early Red; W. L. Bastin, Buscot Park; and W. Humphries, Holme Lacey.

Green-fleshed Melon for flavour. Mr. J. H. Goodacre; S. Bremmell; A. Ruddock.

Scarlet-fleshed Melon, ditto. Mr. R. Lawley, Adcote, with Sutton's Triumph; F. Jordan; and W. A. Webster.

White-fleshed Melon, ditto. Mr. G. Lilley, Leicester; F. Jordan, a fine British Queen; and W. A. Webster, Dodington; there being eleven fine fruits.

Twelve Gage Plums. Mr. J. H. Goodacre; J. Langley; and F. Jordan.

Twelve yellow Plums, other than Gage. J. H. Goodacre; and J. B. Wood, of Ludlow.

Twelve purple Plums. Mr. Goodacre; J. Dawes; J. Langley.

Twelve red ditto. Mr. J. Goodacre; J. Dawes, Ledbury Park; and J. Langley.

Dish of Cherries. Mr. A. Ruddock, Bangor; W. Powell, Addleston, Surrey; W. Pilgrim, Bodorgan, Anglesey.

Classes 108 to 112 were open to Salop only. Six dishes of hardy fruits—Mr. G. Davies; G. Gilbert, Wem; and H. Huxter, Ludlow.

Five cooking Apples. Mr. H. Huxter, first out of thirteen; W. Dovaston; and J. Abbott.

Six Plums. Mr. H. Huxter; J. Mills; Jos. Farrant.

Vegetables.

Although this section does not attract the general public like the plants and flowers, it certainly proved attractive to the exhibitors, for the majority of the classes were well filled. It is quite impossible to give details of all the classes. The chief interest appeared to centre round the collections offered by the leading firms.

Messrs. Sutton and Sons, Reading, offered substantial prizes for a collection of nine varieties, which produced a keen competition. Mr. J. Gibson, gardener to R. W. Hudson, Esq., Danesfield, Great Marlow, won first prize with Prizetaker

Leeks, Autumn Mammoth Cauliflower, Perfection Tomatoes, Best of All Runner Beans, Windsor Castle Potatoes, Ailsa Craig Onions (grand), Solid White Celery, good enough for a November show, New Red Intermediate Carrots, and the Gladstone Pea, a grand collection, well displayed. Mr. E. Beckett, gardener to Lord Aldenham, Elstree, was a good second, having as his best dishes Ailsa Craig Onions, Best of All Runners, Windsor Castle Potatoes, and Perfection Tomatoes. Mr. B. Ashton came in a good third.

Messrs. Jas. Carter and Co., High Holborn, offered similar prizes for an equal number of kinds, and the fight was again pretty keen. Here Mr. E. Beckett scored well, taking premier honours with a model collection. The subjects used were Holborn Model Leeks, Solid White Celery (excellent), Autumn Giant Cauliflower, Ailsa Craig Onions (good), Duke of York Tomatoes, Model Telephone Peas, which were models, Elephant Runner Beans, Windsor Castle Potatoes, and Scarlet Perfection Carrots. Mr. D. Gibson, gardener to Mrs. Johnston, Kingston-on-Thames, was a capital second, having good examples of Jubilee Runners, Ailsa Craig Onions, Up-to-Date Potatoes, and Duke of York Tomatoes. Mr. B. Ashton was third with a grand dish of Alderman Peas.

Messrs. R. Smith and Co., Worcester, contributed special prizes for nine varieties, which again brought out a strong competition, Mr. R. A. Horspool, Ruabon, taking the blue ribbon. His varieties were new Exhibition Leeks, Autumn Giant Cauliflower, Solid White Celery, Ailsa Craig Onions, The Gladstone Pea, Intermediate Carrot, Windsor Castle Potatoes, Smith's Masterpiece Tomatoes, and White Model Turnips. Mr. E. Beckett was second with good typical examples of Ailsa Craig, Worcester Prolific Tomatoes, and Smith's Bountiful Pea. Mr. S. Bremmell third.

Handsome prizes were also offered by Messrs. Webb and Sons, Stourbridge, for eight distinct kinds. Again there was a good entry. Mr. B. Ashton was awarded first prize for a fine collection. His kinds were Peerless Cauliflower, Solid White Celery, Champion Prize Leeks, New Prizewinner Runner Beans, Renown Potatoes (very good), Chancellor Tomatoes, Kaiser Peas, and Ailsa Craig Onions. Mr. W. L. Bastin, gardener to Sir A. Henderson, Buscot Park, Faringdon, was second, and Mr. W. Folkes, gardener to the Rt. Hon. T. F. Halsey, M.P., Hempstead, Herts., brought up the rear.

The silver challenge bowl, valued at £15, and offered by Mr. R. Sydenham, Tenby Street, Birmingham, for the greatest number of points, was again won by Mr. W. Leith, gardener to Col. O. R. Middleton, The Chase, Ross, who has now secured the necessary third victory, and the handsome bowl now becomes his property. In most of the single dish classes the competition was good and the entries numerous. This was especially so in the classes for Onions, Parsnips, Celery, Runner Beans, Potatoes, Tomatoes and Peas.

Certificates and Awards of Merit.

Carnation Aglaia (A.M.), from F. Bouskell, Esq.

Carnations Mrs. Nicholson and C. Gladys, both A.M.'s, from Mr. Aldersey.

Chrysanthemum maximum leucanthemum (A.M.), from F. Bouskell, Esq.

Chrysanthemum maximum King Edward (F.C.C.), from W. Angus, Penicuik, N.B.

Dahlias (Cactus): Brightness (F.C.C.), Shrewsbury (A.M.), and Golden Drop (A.M.); each from S. Mortimer, Rowledge, Surrey. * * Lucifer (F.C.C.), from Dobbie and Co.

Hippeastrum Guiding Star (F.C.C.), Meteor (F.C.C.), Vesta (A.M.), Draconis (A.M.), all from Capt. Holford.

Carnation Queen (A.M.), from Mr. Jos. Lambert, Southport.

Senecio elvorum (F.C.C.), from J. Veitch and Sons, Limited; also Astilbe Davidi (F.C.C.), from the same.

Non-competitive Exhibits.

Mr. Amos Perry, of Winchmore Hill, London, struck out a new line in horticultural exhibiting by staging a group of water plants, having Nymphaea blooms in front. His table contained the comparatively new Glyceria spectabilis fol. var., and the graceful Miscanthus gracilis. Juncus zebrinus and J. spiralis were also noted; but there were a great variety of subjects. A variety of the Water Forget-me-not named The Czar, and the Myriophyllum proserpinæoides were here.

Messrs. Dobbie and Co., of Rothesay, here staged the collection of Potatoes noted in our report of the Drill Hall Show. They had in addition cut Dahlia flowers, including Mrs. Mawley yellow, J. J. Jackson deep crimson, Ibis, orange-cochineal; P. W. Tulloch, rosy-mauve, with bronze centre; and they had many other new varieties. Besides these, there were pompon Dahlias, and a fairly large selection of Pansies.

Messrs. Jackman and Son contributed a collection of herbaceous cut flowers of the best and showiest sorts, with Alpines naturally arranged in rockwork. The selection was choice, and must have greatly pleased the lovers of these plants.

Oranges and other species of the Citrus tribe were brought forward by Miss Talbot (gardener, Mr. R. Milner), Margam

Park, Port Talbot, and were backed by the new *Asparagus myriocladus*, the latter from the Ranelagh Nurseries Co., Royal Leamington Spa.

Mr. A. Myers, Sutton Lane Nurseries, Shrewsbury, showed much skill in floral arrangement, as well as in cultural merit, by the beautiful display of Zonal Pelargoniums he made, and which included considerable variety.

Phloxes, fragrant and fresh, came from Dicksons, Chester, whose finer varieties were Frau S. Buchner, a rosy purple; Tunisie, a deep purple; Amazon, soft white; and Flambeau, cerise-scarlet. They had also *Centaurea macrocephala*, *Gladioli*, and various *Tigridias*, &c. Their selection of stove plants showed them to be as strong here as in outdoor department.

Mr. Bouskell, Market Bosworth, was represented by a large and good collection of herbaceous plants, many of them of the choicest. Messrs. Hewitt and Co., of Solihull, had an immense bank of cut hardy flowers most effectively set up, and in this respect a good object lesson. We can hardly do more than mention such good things as *Silene acaulis*, *Aselepias tuberosa*, the golden-rayed Lily, and the purple-leaved *Prunus*.

Dahlias, Roses, Amaryllis.

Dahlias were most strongly staged by Keynes, Williams, and Co., of Salisbury, all types being represented. From Backhouse and Son, York, there came a goodly collection of dwarf evergreen subjects, with alpine and aquatic vegetation, each and all suitable for rockeries and the environs thereof. The Grass of Parnassus, *Campanula pulla*, *Daphne Cneorum*, *Gentiana acaulis*, *Sibthorpia europæa*, and *Glyceria aquatica* fol. var. were included amongst the many other things.

Roses from Edwin Murrell, of Shrewsbury, filled one large bay, and were exceedingly brilliant and effective. We were able to take note of *Perle des Jardins*, a fine yellow Tea; *Gruss an Teplitz*, Mrs. W. J. Grant, Killarney, Liberty, Oskar Cordel (H.P.), *Niphetos*, and others, all in their best form and deeply coloured.

New or rare stove plants came from Bull and Sons, of Chelsea, with *Polypodium irioides ramo-cristatum*, *Draena Goldiana*, *Ceropegia Woodii*, *Draena Victoria*, and such other things. Their hybrid *Rex Begonias* deserve a special note.

And *Amaryllis* (or *Hippeastrums*), how came they here in the month of August? Only by the great enthusiasm of that noted grower of them—Mr. Chapman, gardener to Capt. G. L. Holford, at Tetbury. People hardly realise what it means to be able to stage a group of *Amaryllis* at this season; and we were able to see the bulbs lying in a retarding room, during a visit made in June. The flowers and plants were finer, and certainly stronger than their neighbours of the early part of the year. The following were put up for certificate: *Guiding Star*, *Vesta*, *Draconis*, *Ceres*, *Argus*, and *Meteor*.

Pentstemons, Sweet Peas, Shrubs.

Mr. John Forbes, of Hawick, Scotland, was able to show some selections of his notable strain of *Pentstemons*, *East Lothian Stocks*, *Carnations*, and *Pansies*, all admirably staged. The wide, open-mouthed flowers and pleasing shades of the following *Pentstemons* were most satisfactory: *Ninon de Lenelos* (white), *Alex. McKinnon* (earmine-scarlet with light throat), *Cigale* (white throat with rosy edge), Mrs. Forbes (purple, and like a *Gloxinia* for size), together with *Lady Arthur*, *Gaston Tissandier*, *Paul Camborn*, and Mrs. B. Cowan. The *Stocks* were really "stocky" and very meritorious altogether.

Sweet Peas from Mr. Eckford, of Wem, renewed the interest in these most fragrant annuals. He staged quite a large display, and had *Lovely*, Hon. Mrs. Kenyon, *Venus*, *America*, *Fascination*, *Monarch*, *Duchess of Westminster*, *King Edward VII*, *Scarlet Gem* (the best of recent years), *Lottie Eckford*, *Lady Beaconsfield*, *Agnes Johnstone*, and *Blanche Burpee*.

Messrs. Clibrans, of Hale, Altrincham, had hardy plants and shrubs. Their *Tradescantias*, *Ulmus campestris*, *Louis Van Houtte*, *Cornus siberica aurea* Späthi, *Acer platanoides laciniata*, *Robinia mimosæfolia*, *Acer dasycarpum heterophylla laciniata*, and *Acer colehicum tricolor* were each beautiful. Their Sweet Peas, *Carnations*, *Phloxes*, &c., made up a bright display.

Tuberous double *Begonias* and double Zonal *Pelargoniums* were sent from Cork by Hartland and Son, and some of their varieties were really very excellent, as witness their *Begonia Prof. Laneiani*, and Mrs. Moyer.

The double St. Brigid *Anemones* from Reamsbottom and Co., Alderboro', Geashill, quite freshly in flower, reminded one that the planting season is again at hand. Messrs. W. and J. Brown, of Peterboro', staged florist flowers, and Jarman and Co., of Chard, had Dahlias, &c.

Mr. Vincent Slade, of Taunton, Som., contributed Zonal *Pelargoniums*, amongst the best being *Barbara Hope* (rosy), *Lilian Duff* (scarlet), *Snow Storm* (white), *Wordsworth* (scarlet), *Andrew Lang* (scarlet, white centre), and Mrs. K. Barnes (blush Rose), all of these being singles. He had amongst doubles, *Thos. Moore*, *Mme. Vandry*, *M. Hasti*, *Mme. Charlotte*, *Pasteur*, and *Mme. Carnot*, the latter a good white.

The group staged by Hobbies, Limited, was at once the

acme of perfection in taste, and comprised first rate material. They staged *Cactus Dahlias*, *Ibis*, *Dainty*, *Beacon*, Mr. Amos Perry, *Ida*, and *Winsome*. The *Roses* were very showy, and the new *Dorothy Perkins* was better than in the height of summer.

Mr. T. R. Hayes, Keswick, made an interesting display of hardy *Ericas*, *Ferns*, and a few hardy flowers. The *Ericas* were staged in baskets, and were much admired; *E. vagans alba*, *E. V. Hammondi*, and the golden variety were most conspicuous. A basket of *Scolopendrium crispum majus* was excellent. Cut blooms of *Romneya Coulteri* were also noted.

Gloxinias, Carnations, Fruit Trees.

Messrs. Sutton and Sons, Reading, made a grand display of *Gloxinias*, the plants were good, and the strain could hardly be surpassed. Crested *Begonias* were also exhibited with a few *Celosias*, the whole being tastefully arranged with light *Palms* and small *Maidenhair Ferns*, which made it most bright and, withal, refreshing.

Hardy flowers were nicely staged by Mr. J. H. White, Worcester, *Montbretias*, *Monardias*, *Gladioli*, *Begonias*, *Phloxes*, and Dahlias being well represented, the front of the table being edged with a large variety of trailing plants.

Messrs. Laing and Mather, Kelso, arranged a table of *Carnations* in first-rate style, chiefly of the border type, though *Malmaisons* and *Trees* were to be seen. The leading varieties were *H. J. Cutbush*, *Waverley*, *Marmion*, Mrs. T. W. Lawson, and Mrs. Nicholson. The blooms exhibited no sign of the weather experienced down south.

Messrs. T. Rivers and Son, Sawbridgeworth, occupied a bay in the large tent with a grand collection of fruit trees in pots; they consisted of *Peaches*, *Peregrine*, small trees loaded with fruit, *Champion* and *Milton*; *Nectarine*, *Dryden*; huge fruits of *Peasgood's Nonesuch Apple*; *Apricots* in variety; *Plum Late Orange*, a tree three years old carrying seventy-four fruits. The pot Vines trained as *Ferns* were quite pictures. *Cherries* were also well represented. The collection could only be described as perfect.

Messrs. Pritchard and Sons, Shrewsbury, made a nice show of *Ferns*, chiefly in decorative sizes, with a few *Dracenas* and *Crotons*. The exhibit was refreshing amongst so many gay groups, and was admirably staged.

Messrs. Gunn and Sons, Brookfield Nursery, Olton, occupied a large table with hardy flowers. The *Phloxes* were fine, and did not appear injured by the weather. *Liliums* in variety were also notable, as were also *Gaillardias*, *Staticees*, and *Sidaleea Listeri*. The whole were well arranged.

Mr. H. Deverill, Banbury, sent hardy flowers in good variety and a large collection of cut Zonal *Pelargoniums* arranged with small *Maidenhair Ferns*. The trusses were large, bright, and fresh, and attracted much notice.

Begonias came in force from Messrs. Blackmore and Langdon, Bath. The blooms were exceedingly fine and well staged, as they usually are from this firm.

Mr. J. Russell, Richmond, had an effective display of foliage plants such as *Dracenas* in variety, some well coloured *Crotons*, *Abutilon Savitzi*, *Aloesias*, and *Caladiums*. The specimens were well grouped, and the whole finished off well.

A nice group of *Caladiums* were put up by Messrs. J. Peed and Son, West Norwood. The plants were large, in splendid condition, and nicely displayed.

Messrs. Jas. Veitch and Sons, Limited, Chelsea, had baskets of *Senecio elivorum* and *Astilbe Davidi*, both recently described in these pages.

Medal Awards.

The following awards were made to honorary exhibits:—

Large gold (special award) to Rivers and Son; to Captain Holford; to Sutton and Sons; and Hobbies, Limited.

Small gold medals to J. Peed and Son; John Russell; Jarman and Co.; Ranelagh Nursery Co.; Dicksons, Chester; W. B. Child; Blackmore and Langdon; Edwin Murrell; R. Smith and Co.

Silver-gilt medals to Amos Perry; W. Cutbush and Sons; F. Bouskell, Esq.; Hewitt and Co.; John Forbes; T. R. Hayes; Davies and Sons; H. Deverill; J. H. White; Henry Eckford; W. Clibran and Son; and Reamsbottom and Co.

Silver medals to Laing and Mather, Kelso; Vincent Slade; B. Hartland and Sons; F. M. Bradley; W. and J. Brown; R. Milner, and J. Backhouse and Son.

Nine Novels-4000 Trees.

A recent calculation was made showing what an immense quantity of timber is used to supply the present-day readers with the substance for their popular novels. Estimating that nine novels have a total sale of 1,600,000 copies, each book containing 20oz, the total weight is 2,000,000lb of paper. Spruce is used to make the cellulose for the paper, each tree yielding about 500lb. A simple calculation shows, therefore, that these nine novels alone swept away 4,000 trees. We wonder whether they were worth it.—("Commercial Intelligence.")

Societies.

Royal Horticultural, August 18th.

The hall on this occasion was full throughout, Gladioli, Bouvardias, and hardy flowers forming the chief features, though mention should be made of the fine collection of Apples and Potatoes. Orchids were well represented for the season.

Orchid Committee.

Present: H. Little, Esq. (in the chair); and Messrs. J. O'Brien, H. M. Pollett, W. Cobb, J. Douglas, F. Wellesley, G. F. Moore, H. Ballantine, H. T. Pitt, E. Hill, W. Boxall, F. J. Thorne, H. A. Tracy, W. H. Young, and T. W. Bond.

Orchids were represented by five nice groups, as well as a number of odd plants from various exhibitors. A well-arranged group came from Mr. H. T. Pitt, Stamford Hill. A few of the best were *Cypripedium Felicity*, *Lælio-Cattleya Wm. Pitt*, *Odontoglossum Florrie*, the quaint *Bollea cœlestis*, *Cattleya Gaskelliana albens*, and *L. C. Myra*.

Messrs. Stanley Ashton and Co., Southgate, also contributed a beautiful collection, the chief being *Lælia Iona* Southgate variety, *L. Amanda*, a natural hybrid, a well flowered plant of *C. Loddigesii*, *L.-C. Massangeana*, and a few nice *Cypripediums*.

Messrs. Charlesworth and Co., Bradford, made a nice display, having good plants of *Cattleya Germania*, *C. Niobe*, *C. Iris*, *Lælio-Cattleya Callistoglossa*, *L.-C. Bletchleyensis*, a fine form, and *L.-C. Iona Superba*. A nice plant of *Brassia Lawrenceanum longissima*, *Stanhopea oculata*, and a few nice *Cypripediums*. A few fine specimens came from Capt. Holford, Westonbirt, Tetbury, which included a fine piece of *Lælio-Cattleya Callistoglossa* variety *excelsa*, *C. Germania Superba*, *L.-C. Eximia*, a well flowered plant of *Vanda cœrulea*, and *C. imbricata*.

Mr. Geo. Matthews, gardener to Lord Auckland, Kitley, Plymouth, sent a spike of *Oncidium luridum guttatum*, which measured seven feet six inches long and carried two hundred and thirty-one flowers.

Floral Committee.

Present: H. B. May, Esq. (in the chair); and Messrs. C. E. Druery, G. Nicholson, R. Dean, J. Jennings, W. Howe, G. Reuthe, C. Dixon, C. Jeffries, J. W. Barr, C. E. Pearson, R. C. Notcutt, W. Cuthbertson, H. J. Jones, C. E. Shea, W. P. Thomson, E. H. Jenkins, W. J. James, Geo. Paul, and Amos Perry.

Messrs. Kelway and Son, Langport, staged a grand collection of Gladioli in four rows running the entire length of the hall. The spikes were beautifully developed, and many of the varieties of great merit. A few of the best were *Mrs. Foster*, *Numa*, *Eclipse*, *Frank Miles*, *Mrs. F. Field*, *Lord Swansea*, *Burgh Westra*, *Sir Evelyn Wood*, *Western Glory*, *Sir J. Llewelyn*, *The Sultan*, *Prince of Orange*, *Tros*, *Grandeur*, *Lord Hawke* and *Lucas*.

Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, contributed a large exhibit of miscellaneous flowering plants, which occupied a table 56ft long. The chief feature being a collection of Bouvardias in 5in pots, which were dwarf and well flowered. The varieties were arranged in blocks. The most conspicuous being *Hogarthi flore-pleno*, *King of Scarlets*, *alba odorata*, *President Cleveland*, *Bridesmaid*, *President Garfield*, and *Reine des Roses*.

From Messrs. J. Peed and Son, West Norwood, came a nice exhibit of hardy flowers and rock plants. In the former were noted good bunches of Phloxes, Tritomas, *Statice latifolia*, Gladioli, and Helianthus. The rock and alpine plants were composed chiefly of *Sempervivums* and *Saxifragas*.

Messrs. Paul and Son, Cheshunt, made a capital display of Phloxes and hardy shrubs. The best Phloxes were *Iris*, *Coquelicot*, *Miss Pemberton*, *Mrs. J. Barker*, *Fiancée*, *Grevin*, and *Le Madhi*. The most noteworthy shrubs being *Tamarix hispida æstivalis*, *Colutea melanocalyx*, and *Cornus Gonchaltz*.

An interesting exhibit of Gladioli, named Goff's Canadian hybrids, came from Mr. H. Ballantine, gardener to Baron Schröder, The Dell, Egham. The flowers were remarkable for their rich and varied colours, some of them being quite new in colour and marking. Judging from appearances, they look like a cross between Child's and Lemoine's hybrids.

Dahlias were nicely staged by Messrs. J. Cheal and Sons, Crawley. The Cactus varieties occupied the centre, flanked on either side by pompon and single forms. The most conspicuous being *Eva*, *Alpha*, *Ajax*, *Mrs. E. Mawley*, *J. H. Jackson*, *Clara G. Stredwick*, *Mrs. H. F. Perkins*, *Lyric*, and *Cheal's White*. The pompons were rather large, but of good form, while the singles were staged in Messrs. Cheal's well-known style.

Messrs. Jas. Veitch and Sons, Ltd., Chelsea, also contributed a charming box of hybrid *Streptocarpus*. The flowers were very varied in colour, and the plants carried plenty of blossom.

Messrs. Jas. Veitch and Sons, Ltd., Chelsea, made an interesting exhibit composed of large baskets of *Senecio clivorum*, *Sambucus canadensis*, *Watsonia Meriana Arderni*, beautifully deve-

loped, and *Astilbe Davidi*, with rosy purple heads, all arranged on the floor.

Frilled Begonias in a fine range of colours came from Herr W. Pfitzer, Stuttgart. The blooms were of good average size and beautifully frilled. The same exhibitor also staged a variety called *Bavaria*, somewhat like the popular *Gloire de Lorraine*, having deep rosy flowers.

Mr. E. Potten, Camden Nurseries, Cranbrook, staged a nice table of hardy flowers, the Phloxes being especially good. A few large bunches of *Trollius* excited a good deal of interest, while a good collection of *Pentstemons* were also noted.

Mr. Amos Perry, Winchmore Hill, made an imposing display of hardy flowers, in which were noted *Coreopsis verticillata*, *Astilbe chinensis*, *Fuchsia globosa*, *Rudbeckia purpurea*, *Winchmore Hill* variety, *Buddleia variabilis*, *Asclepias incarnata*, *Chrysanthemum latifolium* var. *Perfection*, and *Statice Limonium* in red, white, and blue varieties. The whole exhibit being tastefully arranged and displayed.

Hollyhocks came from Messrs. Webb and Brand, Saffron Walden. The back of the exhibit was formed with eighteen splendid spikes in as many colours, while twelve dozen blooms formed the front. The flowers were as double as could be, and the colours left little to be desired. A little *Asparagus foliage* and *Gypsophila* relieved the formality of the exhibit.

Mr. B. Ladhams, Southampton, staged a table of Lobelias, Gaillardias, *Chrysanthemum maximum Monarch* in fine form. *Heliopsis B. Ladhams*, and a variety of perpetual flowering Pinks.

From Messrs. Barr and Sons, Covent Garden, came a large display of hardy flowers and Water Lilies, also an interesting display of hardy Ericas. The Phloxes were staged in good variety. Violas were also prominent, but they do not lend themselves to arrangement in jasper vases. A huge group of *Tritomas* were also noted, and the pretty *Chrysanthemum maximum W. Robinson* was much admired. The dull day did not encourage the *Nymphæas* to open, or they would have made a nice display.

Mr. Jas. Hudson, gardener to L. de Rothschild, Esq., Acton, staged fine *Nymphæas* in fine form. They were *N. stellata pulcherrima*, *N. gigantea Hudsoni*, *N. stellata*, *Berlin* variety, *N. W. Stone*, a very deep blue, and a night blooming variety called *George Huster*, a bright rosy red with narrow petals, a splendid form.

Fruit and Vegetable Committee.

Present: G. Bunyard, Esq. (in the chair); and Messrs. H. Balderson, J. Cheal, H. Esling, W. Bates, A. Dean, J. Basham, G. Kelf, H. Markham, O. Thomas, J. H. Veitch, J. Jacques, J. Willard, G. Wythes, and F. Q. Lane.

Messrs. S. Spooner and Sons, Hounslow, contributed a fine display of Apples, staged in baskets and boxes. There was a good number of each variety exhibited. The fruits were large and certainly well coloured for the season. *Lady Sudeley*, *Pott's Seedling*, *Beauty of Bath*, *Mr. Gladstone*, *Lord Grosvenor*, *Red Astrachan*, *Williams' Favourite*, *Red Quarrenden*, *Worcester Pearmain*, and *Grenadier*, were most conspicuous, and formed a fine feature.

Messrs. Dobbie and Co., Rothesay, staged twenty-five baskets of early and second early Potatoes. The tubers were all grown at Orpington, and were grand examples of culture; every basket contained only clean, typical specimens. The best varieties were *Early Puritan*, *Lord Beaconsfield*, *Windsor Castle*, *Ninetyfold*, *Sir J. Llewelyn*, *Mr. Bresee*, *Eightyfold*, *The Factor*, *Crimson Beauty*, and *British Premier*.

The Rev. G. F. Eyre, Fen Forest, Rock S.O., sent a fine dish of Peas called *The Logan*. Mr. J. Bowerman staged a new Runner Bean called *Hackwood Success*. The pods were over a foot long, bright green in colour, straight, and of good form.

From Mr. Geo. Kent, Norbury Park Gardens, Dorking, came a bunch of *Norbury Seedling Grape*, which has large berries, but the bunch appeared over-thinned.

Mr. J. Hudson, gardener to L. de Rothschild, Esq., Gunnersbury House, Acton, staged a nice basket of Strawberry Royal Sovereign. The fruits were of good size and bright in colour. It would be interesting to know how Mr. Hudson produced such fine fruits so late in the season.

Mr. H. Parr, Trent Park, New Barnet, staged a box of Tomatoes named *Coronation*, but the fruits were too large for general purposes.

A fine box of Peach *Peregrine* came from Messrs. T. Rivers and Son, Sawbridgeworth, the fruits being large and well coloured.

Mr. G. Wythes, gardener to the Duke of Northumberland, sent up a new Melon, and also a Vegetable Marrow, a cross between *Custard* and *Turk's Cap*.

Medal Awards.

ORCHID COMMITTEE.—Silver Floras, for groups of Orchids, to Stanley Ashton and Co., Southgate; Capt. Holford, Tetbury; Charlesworth and Co., Bradford; H. T. Pitts, Esq., Stamford Hill.

FLORAL COMMITTEE.—Mr. H. B. May, Upper Edmonton, for

Bouvardias; Messrs. Kelway, Langport, Somerset, for Gladioli. Silver-gilt Banksian for group of Hollyhocks to Messrs. Webb and Brand, Saffron Walden. Silver Flora for group of herbaceous plants to Messrs. J. Veitch and Sons, Chelsea; and for hardy cut flowers to Messrs. Bull and Sons, Chelsea. Silver Banksians for group of hardy flowers to Mr. E. Potten, Cranbrook, Kent; and to Mr. Amos Perry, Winchmore Hill; for Dahlias and shrubs to Messrs. J. Cheal, Crawley; and for hardy flowers to Messrs. Ladhams, Ltd., Shirley, Southampton.

FRUIT COMMITTEE.—Silver-gilt Knightians, to Messrs. Dobbie and Co., Rothsay, for collections of early Potatoes, and to Messrs. S. Spooner and Sons, Hounslow, for collection of Apples.

Certificates and Awards of Merit.

Bean, Hackwood Success (J. Bowerman).—A Scarlet Runner of fine proportions, about 15in. long, bright green, and even throughout; an acquisition. A.M.

Begonia Bavaria (W. Pfitzer).—A bright rosy variety, apparently of the Gloire de Lorraine type, very free-flowering. A.M.

Gladioli, Lady Muriel Digby (Kelway).—A soft creamy yellow, with a blotch of red on the lower petal. A.M.

Gladioli Nymph (W. C. Bull).—A large white variety with a little crimson at the base, spike badly twisted. A.M.

Lælia Iona, Southgate variety (Stanley Ashton and Co.).—A cross between *L. pumila* and *L. tenebrosa*, the sepals and petals rosy purple, with a deep purple lip. A.M.

Peach Peregrine (T. Rivers and Son).—A large fruit, well coloured almost all over, of exquisite flavour. A.M.

Tamarix Odesana (Paul and Son).—A pale form, carrying large heads of bloom. A.M.

Chippenham, August 12th.

The Chippenham Horticultural Society has so long enjoyed a succession of fine days for their fixture, and has secured such a large share of local patronage, that the day is looked upon as a necessary holiday in the district. The elements once again favoured the fortunes of their exchequer, the attendance being larger than ever, as also were the number of entrants in competition.

The increase in the value of the prize offered for a group of 120 square feet stimulated a larger interest and a much greater effort to excel, and the result was considered a full justification of the committee's action. Messrs. Cray and Sons, Frome, with a bright, pleasing, and choice assortment of foliage and flower, made a successful claim for first prize. Messrs. Cole and Son, Bath, took the second place with an excellent arrangement of choice and suitable material, though it lacked the brightness of the premier exhibit. Mr. Bible, gardener to the Prince Hatfeldt, Draycot, was third. Fuchsias were good, the veteran grower, Mr. G. Tucker, being defeated by Mr. H. Pocock, Hilperton, with beautifully fresh and well-flowered specimens.

Mr. Tucker easily won in the class for six specimen flowering plants, Messrs. G. Hallett, Bath, and J. B. Wood and Son, Chipping Sodbury, following. Mr. Tucker excelled in single and double Tuberosus Begonias, and also Ferns, six of each. His plants were models of good culture. Mr. Strugnell took the lead from Messrs. Wood and Hollett for three Palms, and Col. Vivian's gardener won also with six Caladiums. Liliiums, table plants, and Zonal Pelargoniums made an extensive show.

Roses were excellent, large, fresh, and bright, and the competition both keen and extensive. Messrs. Jefferies and Son, Cirencester, won from Messrs. Townsend and Son, Worcester, and Perkins, Coventry, for thirty-six varieties in a close contest. King's Acre Nurseries, Ltd., took the premier card in the next class for twenty-four varieties, Messrs. Mattock, Oxford, and Jefferies following. With twenty-four distinct Show and Fancy Dahlias, Messrs. Cray and Sons, and G. Humphries, Kington Langley, were the winners, the same growers securing the prizes for twelve Pompon and the same number of Cactus in triplets. Messrs. Blackmore and Langdon, Bath, won easily in the class for Carnations, twenty-four blooms, Messrs. Hooper and Alden, also from Bath, following, the contest being keen, and the blooms of high merit.

Mr. Tucker scored with twelve bunches of stove and greenhouse cut flowers, and Messrs. Stokes and Son annexed the first prize for herbaceous flowers with an excellent collection. Messrs. Jefferies and Mattock staged beautiful Gladioli in twelve varieties, and Mr. W. D. Porter, Bath, defeated the usually successful Chippenham grower, Mr. Humphries, with herbaceous Phloxes.

Fruit, both in extent and quality, surprised not a few among exhibitors and visitors, Apples and Plums, which are so notoriously scarce, being so well staged here. For a collection of eight varieties of fruit, Mr. Strugnell, Mr. Pitts, gardener to Sir Audley Neeld, Grittleton, and Mr. H. Jones, Bath, won in the order of their names with fruit of high merit. Messrs. Radman and Son won with black, and B. de Bertodano, Esq., with white Grapes; T. Harris, Esq., Colne, and Col. Vivian taking the prizes for one and three dishes of Peaches respectively. With Nectarines, Messrs. Bible and Harris won with beautifully coloured Pine-apples. Mr. Cook, Neston Park, with

three dishes of culinary, won from Mr. E. Hall, Bath, both staging really nice fruits of Warner's King and Ecklinville. Positions of these exhibitors were reversed in the class for three dishes of dessert Apples. Cherries were scarce, and Pears still more so.

Table decorations proved an interesting annexe, and created a deal of criticism on the part of exhibitors and visitors. A tent was devoted exclusively to these ladies' exhibits. Mrs. Colston Hale, Warminster, Mrs. Fisher, Bath, and Miss Compton, Malmesbury, were the prizewinners, but much debate was to be heard bearing on the tastes and decisions of the lady judges. One very handsome table dressed with Orchid blossoms was absolutely ignored, while one much overdone with a poor coloured Sweet Pea arrangement was admitted into the select list. With Messrs. Perkins' shower bouquet of beautiful Orchids came free and frequent commendation of praise, Messrs. Cole and Son, Bath, and Mr. W. D. Porter, Bath, also showing well.

Classes provided for the district did not bring out anything strikingly meritorious, and the popular opinion freely expressed was that the prizes would be better spent in improving other existing open classes. Amateurs' and cottagers' sections are a strict necessity, and are well responded to, but the district competition is made poor by the small area affected, and the paucity of entries made by local gardeners.

The society is well supported by resident nobility and gentry, and Hardenhuish Park, lent for the purpose by E. H. Clutterbuck, Esq., makes an ideal show ground. Mr. W. Small, secretary, deserves well of his committee for the exercise of strictly business capacity and geniality of manner to all and everyone alike.

Tavistock, August 12th.

On Wednesday, August 12, the fifty-sixth annual exhibition of flowers, fruits, and vegetables took place in the Market Hall. The Devon Bee-keepers' Association held their annual meeting in connection with the flower show. Honey, wax, bees, appliances, &c., were on view, and a lecture on bee-keeping was given by Mr. J. Jordan, of Bristol, which was greatly appreciated. Charming displays of flowers and plants from the owners of gardens in the neighbourhood delighted the public. From Mr. F. Q. Clatworthy, gardener to Mr. F. Bradshaw, Lifton Park; from Mr. J. Quick, florist, The Library, Tavistock; and from Mr. J. Warren, Parkwood Nurseries, Tavistock. Masses of clean, well grown plants the three groups showed. A beautiful stand of plants sent by Mr. Edred Marshall, of Parkwood House (gardener, Mr. C. Chanter), completed a well arranged set of non-competing decorations. Mr. Chatworthy's foliage and flowering plants were arranged at the upper end of the hall, reaching high towards the roof. There were *Campanula pyramidalis*, President Carnot, *Begonia* (pink), *Diascia barbara* (a new variety, light pink), *Acalypha Sanderi*, *Lilium lancifolium*, &c.

Mr. J. Quick's stand was large and good. Here were choice Orchids, among them *Disa grandiflora* (Flower of the Gods), *Cypripedium Rothschildianum*, *Odontoglossums* in variety, *Oncidium cucullatum*, stately Palms, *Seaforthia elegans*, and *Chamærops excelsa*, &c. Books and flowers are evidently a combination in Tavistock's librarian's view. Mr. Marshall's stand showed a light and tasteful handling. *Malmaison* Carnations, *Montbretias*, *Galtonias*, *Marguerites*, *Liliums*, *Palms*, *Fuchsias*, and *Achimenes* were lovely. Mr. J. Warren occupied the whole of the lower end of the hall, whose plants were much admired.

From the Palace of the Poor—Tavistock Union Workhouse garden (Master, Mr. G. Coles)—came a highly commendable collection of vegetables. Mr. J. Pearce showed twelve varieties of Sweet Peas; Mr. Hepper, autumn Onions; and Messrs. S. Worth and T. Northcott boxes of Cactus Dahlias; while Mr. Greenfield's (mark the word) Grass bore the statement that the seeds were found buried with a skeleton in a pre-historic cist (grave) at Harlyn Bay, North Cornwall coast, and were probably 2,500 years old. After that, I think that the show can truthfully be described as the best held in Tavistock for some years. Competition in some classes was keen. Some wonderful Onions were shown by Mr. Clatworthy, Lifton Park. They ought to have gone to Taunton the following day. The attendance was larger than for four years past. The Duke of Bedford is patron of the society, and his agent, Mr. E. C. Rundle, of Deer Park, is president for the year. Mr. Rundle in many ways has greatly helped the show. Mr. G. Chapman, secretary, was a great help to all concerned in a good show.

Mr. E. Sly, of Tamerton, was first in collection (1) of vegetables; Mr. T. Paige first in collection (2) of vegetables; and Mr. R. Stanbury, of Lifton, was first in collection (3) of vegetables. Mr. F. Q. Clatworthy, in the open competition, carried off first prize in twelve varieties of Potatoes, named, eight of each sort; Mr. E. Sly came second, and Mr. Hocking, gardener to Rev. S. Baring-Gould (a world-wide name), was third. Among the competitors were several winners who have been members of horticultural classes under the County Council. Many subjects are omitted from this report, but keen competition was experienced in Onions, Potatoes, and Peas.

Among the successful exhibitors of flowers were Messrs. Merrifield, for annuals; Brown, for Carnations; Webb, for Dahlias; H. Crossman, for Geraniums, &c. For collection of cut Roses, first, Mr. J. Southcott; second, Mr. H. Crossman. Mr. Gladstone Apple, among the fruit, took a high place, the colour and flavour being very fine. For the open collection Mr. Clatworthy was first, Mr. Hocking second, and Mr. W. H. Chichester third. Melons, first, Mr. W. Chichester; second, Mr. Clatworthy. Best ripe fruits, first, for collection, Mr. Clatworthy; second, Rev. S. Baring-Gould. Peas, fifty pods, first, Rev. S. Baring-Gould; second, Mr. W. B. Trahair; third, Mr. W. Wilmot. In honey Messrs. W. E. Brooking (Kingsbridge), J. Sheldon (Umberleigh), W. E. Brooking (11b section comb honey), E. E. Scholefield (Chudleigh), C. Squire (Morthoe, Ilfracombe), J. M. Cann (Brixham), and W. J. Cavey took first prizes. The honey was of a very superior quality, and greatly commended by the judge.—X.

Taunton, August 13th.

Unqualified praise resounded on all hands of the extraordinary merit and extent of the thirty-sixth annual exhibition of the Taunton Society, held on the above date. The weather, too, being gloriously fine, attracted visitors in their thousands.

Trained stove and greenhouse plants made a magnificent display, the whole length of the spacious tent being filled on one side. Messrs. J. Cypher and Sons championed the class for twelve, *Stephanotis*, *Ixora Williamsi*, *Allamanda nobilis*, *Bougainvillea glabra*, *B. Sanderi*, *Ixora Pilgrimi*, *I. Duffi*, and an immense plant of *Statice intermedia* were most conspicuous specimens. Mr. W. Vause, Leamington, was a good second; Mr. Thomas, gardener to W. G. Marshall, Esq., third; and Mr. Tucker, Trowbridge, fourth. With six Messrs. Cypher were again well first; Mr. Vause second, and Mr. Rowland, gardener to W. Brock, Esq., third. These exhibitors won with eight foliage plants in the same order of names, Messrs. Cypher being distinctly ahead. Towering Palms and bright *Codiaeums* marked their fine exhibit. Messrs. Rowland and Tucker had the best Ferns. Similar classes are provided for amateurs, in which foliage and flowering plants are allowed.

In that for twelve Mr. Thomas led easily, his *Codiaeums* being much the finest in the show, *C. Warreni*, *C. Reidi*, *C. Andreanum*, and *C. Harrisoni* being especially good. The flowering plants were not so fine as the foliage, though all were excellent. Mr. Rowland came second with an even twelve, all flowering plants. *Fuchsias* were small, *Begonias* numerous and bright, *Liliums* (good) and *Caladiums* refined in plant and choice in variety, Mr. Thomas' being especially good. Single specimens, Orchids, and new and rare plants found Messrs. Cypher, Tribble, Thomas, W. H. Day, and F. Hubbard in healthy rivalry.

Groups of plants lost the service of the Messrs. Cypher, but in Mr. Vause it was at once seen that an exponent of the art of floral blending was present. A wide and lofty cork covered arch was made to carry a beautifully furnished and graceful Phoenix, beneath which were grouped small and choice Orchids and varied foliage plants, *Codiaeums*, *Cocos*, *Caladiums*, &c.; while the graceful *Humeas*, with their brown plumose sprays afforded just that quiet touch of elegance no other plant can do. A cool-looking base of moss gave a finishing touch to what was an excellent example in tropical effect. These groups are displayed in an oval 13ft by 10ft space, and are so arranged that visitors can make uninterrupted promenade among them. Mr. Rowland's group from Exeter also afforded some striking features, *Liliums*, Bamboos, Orchids, and *Codiaeums* being deftly arranged with the hand of an experienced exhibitor. Messrs. Cole and Son, Bath, were third. A smaller group for amateurs, 10ft by 8ft, also of an oval shape, found Mr. Rowland an easy winner; Mr. Kidley, gardener to Col. Sanford, being second, and H. S. Baily, Esq., Glastonbury, third.

Cut flowers appeared in the same extensive and varied character. So crowded was the available space that many exhibits could not find advantageous inspection. Roses were really grand. Messrs. Perkins, of Coventry, won in the class for thirty-six, and also that for eighteen varieties, Messrs. Townsend and Sons, Worcester, and Jarman and Co., Chard, being second respectively, Messrs. H. Corder, Bridgwater, and R. F. Hobbs, Worcester, taking the thirds. Mr. Corder won from Messrs. Townsend and Hobbs with eighteen Teas. Dahlias, like Roses, were bright, large, and good. With twelve, Messrs. Cray, Humphries, and W. Treseder, Cardiff, took the prizes. Messrs. Cray and Sons took the first card with pompon and single varieties; Mr. Humphries won with six Fancies; and Messrs. Jarman six Cactus. Phloxes, Asters, Carnations, Hollyhocks, *Begonias*, Sweet Peas, herbaceous and choice greenhouse flowers all found a large entry, high class quality, and many admirers. Names are so numerous that space forbids their record.

Decorative tables hold an important place in the Taunton schedule and show ground, and on this occasion the artistic element was present in goodly force, and it was pleasant to find the work of the judges gave but little cause for critical comment, which is so common in this now popular phase of flower

shows. A dessert table laid for eight persons with fruit and flowers found a winner in Mr. F. Lock, Crediton. He had beautiful Orchids, well arranged with Peaches, Melon, Grapes, and Nectarines as his dessert fruit. Messrs. Cole and Son won the second prize, and Mr. W. Vause third, all employing similar Orchid flowers. Mrs. Blake, Bath, won in the ladies' class for a similar table. Mrs. Hill, Bridgwater, second, and Mrs. Cooper, West Monkton, third. An extra prize and h.c. cards were given other exhibits, so numerous and good were they. Another class for floral table was quite as largely contested. Hand bouquets and vases of flowers were excellent, the prizes culled mostly by professionals, among whom were Messrs. Perkins, Cypher, Vause, W. H. Coles, Bristol, and Treseder, Cardiff.

Fruit made a grand display. Three competed for a collection of eight dishes. Mr. T. Turton, gardener to R. D. Wingfield Digby, Esq., Sherborne Castle, leading with Black Hamburgh (small in bunch), Muscat of Alexandria (also small in bunch, but well coloured), an 11lb Melon, Royal George Peaches, Nectarines (good), Brown Turkey Figs, and Apricots. Mr. G. Hall, gardener to the executors of the late Lady Louisa Ashburton, was second; but except for the Melon his dishes were decidedly stronger than the first prize lot. Col. Vivian was third. For four dishes Mr. Hall won from Mr. Mitchell, gardener to J. W. Heming, Esq., both having extra good fruit. Mr. Kidley third. With Black Hamburghs Mr. Mitchell won easily, as he also did with Muscats and any other kind of black, staging good Gros Maroc. Mr. Hall won with white, other than Muscats, with Foster's Seedling.

Mr. Cooper, gardener to W. Macadam Smith, Esq., president of the society, led with a fine dish of Peaches, and Mr. Kidley, gardener to Col. Sanford, with beautifully coloured Stanwick Elruge, won in the class for Nectarines. Apricots were good, also Pears, for the year. Plums, both light and dark coloured, were excellent; but dessert Cherries were absent. Morellos were finely shown. Apples, too, were plentiful and good; indeed, one would scarcely believe the season to be a bad one for hardy fruit, judged by the quantity shown at Taunton.

Vegetables are always presented in strong force at this Western show, and this season proved no exception to the old rule, and the cottagers' section, as is always the case, was filled with a magnificent display of every kind. Potatoes were grand, so clean, large, and shapely, and the judges must have had considerable difficulty in deciding between the merit of such closely allied qualities. In the open classes Mr. Mavis, gardener to Sir J. Shelley, Bart., Crediton, won with a grand exhibit. Mr. Kidley, also a veteran vegetable grower, was second; and Mr. H. Moore third. Potatoes in six varieties from Messrs. Wyley, Mavis, and Kidley made an admirable display, the first-named winning also with coloured kidneys and white rounds. All other vegetables, Carrots, Peas, Beans, Onions, Tomatoes, Lettuces, Marrows, and Turnips, were each severally of the highest state of perfection. Much might be written of the cottagers' array, but space forbids.

The park, which forms such an easily accessible show ground, affords an ideal spot for such an extensive show, the many tents being grouped so that promenade is made easy and pleasant. An influential and business-like committee control arrangement, which work with clockwork smoothness. The unanimous verdict from everyone seemed to re-echo in the words "Everything splendid!"—music, weather, show, and its management. Mr. Winsor is the experienced secretary, on whom the highest credit reflects.

Leith, August 14th and 15th.

Leith Horticultural, Industrial, and Sports Society's twentieth show was held on Friday and Saturday, August 14 and 15, at the Hawkhill grounds. Three years have elapsed since the show was last held at Hawkhill, the site usually being the Victoria Park; but the committee, fully aware of the growing popularity of the show, determined to hold it at Hawkhill. Here there is ample room for the many attractions which lure the individual from city and hamlet, be he a lover of flowers, a devotee of sport, or an admirer of art. The only regrettable part is that these grounds are so difficult of access, being a considerable distance from either tram route or railway station. All round the show was one of great merit. The classes were well filled, the entries totalling 1,078, and entirely filling the large marquee, in former years containing both the flower show and industrial exhibition section. Competition was perhaps strongest in the section for plants and cut flowers, some remarkably fine specimens being staged. A class which usually excites great admiration is that for floral designs, open to florists in Edinburgh and Leith. A much admired design, which was rightly awarded first prize, was a beautiful cross and pedestal, composed mainly of dark purple Sweet Peas, the cross being relieved by white Sweet Peas and Lily of the Valley; while the pedestal made an exquisite background for a cluster of *Stephanotis*, pink Carnations, and Fern.

In all sections for tables of plants there was exhibited a standard of excellence which would have done credit to the Waverley Market shows. In the class open to all for a table not

to exceed 12ft by 6ft, arranged to produce artistic effect, the first prize (a silver cup value £10) was easily won by Mr. Wm. Jobson, nurseryman, Portobello, with an exceedingly artistically arranged display of foliage and flowering plants, surmounted by a fine specimen of *Cocos Weddelliana*. Mr. Phillips, Granton Road Nursery, secured second place with a table which produced a good effect, but rather heavily arranged. Mr. P. Hunt, Murrayfield, was third with a bright display. In the gardeners' section, for the best arranged table of plants, there were set up some nice tables. Mr. A. Alexander, Craigend Park, Liberton, took first place, the second being awarded to Mr. P. Hunt. The amateurs' section for table of plants, 8ft by 4ft, brought forward a large number of entries, and the competition was keen. The first prize, Thos. McKie Memorial Cup (presented by Provost McKie), gold badge, and £2, being secured by W. J. Bryson, 53, East London Street; second, Isaac Black, 30, Beaverhall Terrace; third, Wm. Plinderbith; fourth, D. McPherson, 35, McDonald Road.

For twenty-four Roses, open to nurserymen, there were five entries, the first place (gold medal) being secured by D. and W. Croll, Dundee; second (silver medal), Hugh Dickson, Belfast. Twenty-four herbaceous spikes or bunches, at least twelve varieties, first (gold medal), J. Cocker and Son, Aberdeen; second (silver medal), John Downie, Murrayfield. Twenty-four Cactus Dahlias, first, Hugh Dickson, Belfast; second, John Downie, Murrayfield.

For some unknown reason the majority of the local nurserymen seem to have given this flourishing show the cold shoulder in the way of exhibits, the only one forward being a highly artistically arranged display of Violas and Pansies, Show and Fancy, from John Downie, Beechhill Nursery, Murrayfield. This was worthily awarded a silver medal. Close by, shown by the same firm, was a bunch of new *Chrysanthemum maximum* King Edward VII., the flower being of great size, and the petal of good form and substance. It is the largest type we have yet seen, and seems a decided acquisition.

Watching the crowds which flocked to this show, even in the adverse climatic conditions which prevailed on Saturday afternoon, the writer of this could not but contrast the success of the undertaking from a financial and general point of view with the poor results which are sometimes produced at our autumn show in the Waverley Market. The success of the Leith show committee might well induce any society to follow in their footsteps, for after all even the beauty and variety of the flowers may not appeal equally to all, and some other attraction in conjunction is not only desirable, but often necessary, in order to acquire success. May the energetic and genial secretary, Mr. Fairley, and his able assistants, long be able to conduct and still further popularise this successful exhibition!—EDINA.

National Carnation and Picotee (Northern Division).

The Northern Society held its exhibition in the Royal Botanical Gardens, Manchester, on Saturday last. Pastoral plays and a fine military band were the attractions, and would undoubtedly have been a great pleasure to visitors, but unfortunately the rain came in torrents throughout the day, and the attendance was indeed a small one. J. W. Bentley, Esq., J.P., the esteemed president for the year, and Mr. Wm. Prescott, the courteous secretary, did all they could. There was a good muster of exhibitors from various parts, and many flowers of great merit.

For twelve Carnations, bizarres, flakes, and white grounds, Mr. T. Lord, Todmorden, took the lead out of seven, with J. S. Hedderley, Geo. Melville, Master Fred, Arline, Sportsman, Mrs. T. Lord, Admiral Curzon, Gordon Lewis, Mrs. Shaw, Sarah Payne, Miss C. Grahame, and C. F. Thurston; second, Mr. J. W. Bentley, Stakehill, with Admiral Curzon, and two extra good seedlings; third, Mr. T. Etherington, Middleton Junction.

For six bizarres and flakes, Mr. J. Edwards, Moston, had really good flowers of Pandora, J. D. Hextall, Rt. Houlgrave, Gordon Lewis, C. F. Thurston, and Sarah Payne; the second, Mr. J. Brocklehurst, Marple, with G. Melville, fine; third, W. Curbstone, Kilmarnock, and fourth, D. Walker, Kilmarnock.

The Picotee classes were admirable. Mr. C. F. Thurston, Wolverhampton, taking a distinct lead for twelve dissimilar white grounds, all in the best varieties; Mr. A. R. Brown, Birmingham, was a good second, and third, Mr. T. Lord.

For six white grounds there were ten lots, Mr. J. Edwards gaining the victory with extra choice flowers; second, Rev. C. Gottwaltz, Droitwich, and third, Mr. J. W. Bentley. The class for twelve Selves was excellent, four competing. Mr. A. R. Brown scored with heavy flowers, in which "dressing" was almost nil; second, C. F. Thurston; and third, T. Lord.

For six Selves, the Rev. C. Gottwaltz won handsomely out of eight lots; second, Mr. Curbstone, with fine Barras and Nubian; third, Mr. D. Walker.

For twelve Fancy or yellow ground Carnations or Picotees, Mr. C. F. Thurston staged magnificent flowers of Queen Bess, C. B. Thomson (2), Daniel Defoe (2), Czarina, Artisan, Argosy, &c.; second, Mr. A. R. Brown. A nice even lot were the sixes,

Mr. D. Walker winning with H. Falkland, Helios, Edith, Chas. Martel, Paladin, Gronow. There was a smart battle for single blooms. Best scarlet bizarre, Mr. Thurston, with Rt. Houlgrave. Best crimson bizarre, first and second, Mr. T. Lord, with Master Fred and G. S. Hedderley. Best pink and purple bizarre, first and second, Mr. T. Lord, with T. Lord and Sarah Payne. Best scarlet flake, first and second, Mr. C. F. Thurston, with Sportsman. Best rose flake, Mr. C. F. Thurston, with Mrs. Rowen and Mr. T. Lord. Best purple flake, first, Mr. T. Lord, with Gordon Lewis.

PICOTEES—Best heavy edged red, first, Mr. T. Lord, with J. Smith; second and fourth, Mr. Brown, with Brunette and Beatrice. Best light edged, first and third, Mr. Thurston, with Mrs. Gorton and T. Williams. Best heavy edged purple, first and fourth, Mr. J. Edwards, with Mrs. Openshaw. Best light edged purple, first and fifth, Mr. A. R. Brown, with Pride of Leyton and Myra; second and fourth, Rev. C. Gottwaltz, same varieties. Best heavy edged rose, scarlet and salmon, first, Mr. A. R. Brown, with Mrs. Payne. Best light edged rose, scarlet or salmon, first and fifth, Mr. A. R. Brown, with Lucy; second and fourth, Mr. T. Lord, with Fortrose and Favourite.

The premier blooms were: J. B. Hextall Carnation from Mr. J. Edwards and to Myra Picotee from Mr. Brown. Certificates were awarded to Rev. C. Gottwaltz for Myra, a medium purple edge, and to Lucy, a light edged scarlet Picotee. Mr. Ben Simonite gained a certificate for Aurora, a heavy edged rose Carnation.—R. P. R.

Harborne Gooseberry Growers'.

The eighty-ninth annual show of this society was recently held at the Green Man Hotel, Harborne.

The following are a few of the chief awards:—Premier prize: Mr. E. Withers, Bobby, 20dwt 9grs. Twin berries prize: first, Mr. E. Withers, Fascination, 28dwt 17grs.

Class prizes.—Red: Mr. E. Withers, with Bobby, 20dwt 6grs. Yellow: Mr. E. Withers, Leveller, 20dwt 6grs. Green: Mr. E. Withers, Stockwell, 17dwt. White: Mr. E. Withers, Transparent, 19dwt 21grs.

Six red berries.—1, Mr. E. Withers, Bobby, 11dwt 12grs; 2, Mr. W. James, Dan's Mistake and Bobby, 93dwt 12grs.

Six yellow berries.—First, Mr. E. Withers, Leveller, 116dwt; Messrs. James and Careless next with Leveller.

Six green berries.—1, Mr. T. Careless, Shiner, 91dwt 6grs; 2, Mr. W. James, Surprise, 87dwt 18grs; 3, Mr. E. Withers, Surprise and Telegraph, 87dwt.

Six white berries.—1, Mr. E. Withers, Transparent, 98dwt; 2, Mr. A. Wise, ditto, 82dwt; 3, Mr. W. James, with Careless, 77dwt 19grs.

Special prizes were awarded to Messrs. E. Withers, T. Careless, T. Richards, W. James, and B. Smallwood, with such varieties as British Oak, Bobby, and Leveller.

In addition to the foregoing show there was held a few days previously another under the auspices of a much younger society at the Sportsman Inn, Harborne. It was not so large in extent. Prizes were also offered for Gooseberries at the recent amateurs' and cottagers' show held in connection with the Harborne Charity Sports Fête.—W. G.

Rock Ferry.

In the classes for groups six competed, that for 64 sq. ft. being secured by Mr. G. Osborne, gardener to Dr. Cooke, Tue Brook; Mr. H. Ogden, second. For a space of 45 sq. ft., Mr. H. Morris, gardener to G. Atkin Esq., took the lead, having a good centre and highly coloured *Dracænas*, *Caladiums*, *Crotons*, &c. Dr. Cooke won for six stove and greenhouse plants.

Substantial prizes were offered in other miscellaneous plant classes, a word being due to Messrs. Roby and Lee for extra fine Begonias, and to Mr. C. Jones, gardener to E. Evans, Esq., Spital Old Hall, for two excellent specimen Ferns of *Nephrolepis davallioides furcans* and *Davallia fijiensis*. The principal specimen Orchid was *Cattleya Sanderiana* from Mr. S. Bell, gardener to J. U. Hodgson, Esq.

The cut flower competition was a complete success. For a collection of Carnations and Picotees six competed, and Mr. Findlow, gardener to A. J. Oakshott, Esq. led; Mr. J. Clarke, gardener to H. D. Trelawny, Esq., Shotwick Park, near Chester, second, his stand containing distinct varieties, each flower standing clear of its neighbour, and of fine form. There were some striking table decorations. Roses were fully up to the average, Mr. R. Jones, gardener to R. Kellock, Esq., being first for twelve. Herbaceous flowers alone were worth the price of admission, Messrs. J. Lee and J. Clarke winning. Indoor cut flowers from Mr. Hodgson were very choice. The display of fruit was large, Mr. Ferguson, gardener to Mrs. Paterson, coming first for six dishes. Mr. A. Crisp, gardener to M. Clover, Esq., secured Peach and Nectarine classes with Dymond and Red Roman. Grand Black Hamburgs and Madresfield Court came from Mr. J. Richards, gardener to T. B. Kendall, Esq.; Mr. Hodgson with Muscats, and Mrs. Paterson, Golden Champion. Mr. C. Irvine,

gardener to F. C. D. Castle, Esq., had good hardy fruits. Earl's Favourite from J. H. Kenion, Esq., was the premier Melon.

The vegetable class were of the highest credit, Mr. H. D. Trelawny, proving a great winner, with nine varieties, consisting of Ailsa Craig Onions, Eclipse Cauliflower, Duke of Albany Peas, Potato Snowdrop, Polegate Tomato, Sutton's Best of All Runners, Superlative Celery, Snowball Turnip, and Sutton's Model Red Carrot. Other most successful exhibitors were Mr. J. H. Clarke, T. Joynson, J. Coulthrop, and J. Lee.

In concluding, I may say that T. B. Kendall, Esq., the courteous chairman, and R. Meaker, Esq., secretary, did valuable work to make the show a success, without the absence of music or any outside attraction. The unnamings of exhibits was most annoying to the public, and in some cases to those versed in the work of reporting. Rule 4 in the schedule should on future occasions be strictly enforced.

Mr. H. Middlehurst had a handsome collection of Sweet Peas.—R. P. R.

Sparkhill and District, August 15th.

Stormy weather was associated with the holding of the third annual summer show in connection with this enterprising society. In evidence of its increasing popularity, it may be remarked that during the past year there has been an increase of 100 in the membership, which now stands at 500. Prizes to the value of £150 were offered, with no fewer than 150 classes, and a largely increased number of entries. Much credit is due to the courteous hon. sec., Mr. Wm. W. Staples, and his efficient staff of committeemen for the arrangements throughout. Despite the unpropitious state of the weather the show was well attended, and a fair proportion of the visitors hailed from Birmingham. Sparkhill also boasts of a spring show, thus affording additional evidence of the love of horticulture permeating the district.

In the open class section prizes were offered for arrangements of miscellaneous plants, arranged to produce the best effect. Mr. G. Hancox proved to be an easy first with a tasteful arrangement, in which richly coloured Codæums (Crotons) formed the leading feature; while a cork bark covered arch at the back of the design, surmounted with an elegant Palm and otherwise tastefully adorned, helped to complete the tout ensemble of this artistic composition. The second honours fell to Councillor W. Waters, Acocks Green, for a very effective development, with Mr. S. Mason in the third position. Stove and greenhouse plants were fairly well staged by Messrs. G. Hancox and Waters. Begonias, Fuchsias, Pelargoniums, and ornamental foliage plants were also shown by various exhibitors.

Cactus Dahlias were very well staged, the winners being Messrs. M. W. Pemberton, T. Williams, and G. Ingram, in the order named. Pompon Dahlias were nicely shown by Messrs. Pemberton, W. E. Wilson, and G. Ingram, and Roses by Messrs. R. Dawes, J. W. Simcox, and G. F. Spittle. Carnations and Picotees did much credit to the successful contestants, Messrs. J. Gregg, W. Pemberton, and J. W. Smart. Sweet Peas formed a pleasing feature, and the prizetakers were Messrs. Hinton Bros., Warwick, E. Deakin, and W. Marple.

For the prizes offered by Messrs. Hallams, seed merchants, Birmingham, for nine distinct varieties of Sweet Peas, arranged with their own foliage, Gypsophila paniculata, or Fern fronds, Messrs. C. Cooke, C. Brasier, and G. Chadband were the respective winners. For nine varieties of Sweet Peas, arranged with foliage or Gypsophila, Messrs. C. Brasier, W. Marple, and W. Brasier were the successful contestants, as in order named. Mr. James Stredwick, St. Leonards-on-Sea, offered special prizes for eighteen Cactus Dahlias, the only two contestants being Miss May Edwards and Mr. W. Deakin, each with very good blooms.

Prizes were offered for dinner table decorations. In the ladies' class the first prize was awarded to Mrs. E. Pitt, and Miss Woolman, Miss A. Horton, and Miss B. Gibson were the other winners, all with tastefully arranged effects. These were open to ladies residing in the society's district, i.e., within a radius of four miles of Camp Hill Grammar School. Florists and members of nurserymen's families may compete in the above class 19; whilst in class 20, for dinner table decorations, florists' and members of nurserymen's families are excluded. The first was accorded to Miss M. E. Clarke; second, Mrs. Machin; third, Mrs. E. Bodley; fourth, Miss J. A. Tidmus; and fifth, Miss E. Matthews, for most tasteful creations; and the same remark applies to Miss M. E. Clarke, Mrs. Bodley, and Miss Guest for centre table decorations. Altogether, the foregoing exhibits formed an attractive feature of the show. Strongly shown were the various exhibits of cut flowers, but space will not allow details.

Vegetables, considering the untowardness of the season, were remarkably well shown in the major portion of the exhibits in the various classes.

Honorary awards were made to Messrs. Thomson and Co., Birmingham, for a miscellaneous collection of plants, Carnations, and Picotees (silver-gilt medal). Silver medals to Messrs. W. L. Pattison, Shrewsbury, for a fine collection of Violas; Mr. H.

Woolman for a floral arrangement; Messrs. W. H. Simpson and Sons, Birmingham, for herbaceous flowers and Sweet Peas; Councillor W. Waters, Violas; Mr. W. B. Child, hardy herbaceous flowers; Messrs. Yates and Sons, Birmingham, for cut flowers and Onions, the latter of immense size; and Mr. L. E. Lloyd for a group of plants. Bronze medals to Messrs. Hinton Bros. for Antirrhinums and border Carnations; Mr. E. Watkins for floral designs; Mr. A. H. Foster for a collection of plants and vegetables. Certificates of Merit to Messrs. Webb and Sons, Wordsley, for a collection of Sweet Peas; Mr. G. Walker a group of Begonias; Mr. W. T. Price for a collection of plants; Mr. G. Andrews, a table decoration; and to Mr. G. F. Spittle, a collection of border Carnations (seedlings). Garden allotment prizes were keenly contested for; also for best kept gardens.

Cardiff Gardeners'.

The annual outing of members took place on Monday, August 10, when the party, numbering nearly fifty, journeyed to The Hendre, Monmouth, the beautiful residence of the Rt. Hon. Lord Llangattock. Leaving Cardiff in saloon carriages at 9.30 a.m., they reached Abergavenny at 11.10, where the members proceeded to the Swan Hotel, and a splendid dinner was served at 12 o'clock by the host (Mr. P. Lloyd). Mr. F. G. Treseder, F.R.H.S., N.D.S., occupied the chair. The toast list was of a very brief nature, owing to a limited time. The chairman moved "The King and Royal Family." Mr. H. R. Farmer moved the next toast, that of "The President" (J. Lynn Thomas, Esq., C.B., F.R.C.S., J.P.). Owing to the unavoidable absence of that gentleman, Mr. Thomas Malpass, head gardener to that gentleman, responded. "The Cardiff Gardeners' Association" was proposed by Mr. C. Phelps and responded to by Messrs. H. R. Farmer, Thos. Malpass, and John Julian. Mr. T. Clark proposed "The Visitors," and Mr. Roddy responded. "The Chairman" was proposed by Mr. W. J. Prosser and responded to by Mr. F. G. Treseder.

After the party was photographed they proceeded in brakes to The Hendre, which was reached after a little over two hours' drive through the beautiful and picturesque valley of the Usk. Mr. Thos. Coomber, F.R.H.S., met the members at the entrance and conducted them over his charge, where, as usual, everything looked spick and span and in perfect order. Fruits under glass, viz., Grapes, Melons, Peaches, Nectarines, Figs, and Tomatoes, were a prime and useful lot for the supply of the mansion.

Coming to the outside crops, Gooseberries and Currants were in abundance, but, as Mr. Coomber had told many of the members previously at our late show (where he acted in the capacity of a fruit judge), he had no Apples nor Pears, and true it appeared that he must have suffered very severely by the disastrous hailstorms during the spring, when the trees were in blossom. The lawns and rockeries looked remarkably well, which reflected great credit on the management. Great interest was centred upon the two trees recently planted by T.R.H. the Duke and Duchess of York (now Prince and Princess of Wales). By special request the members were photographed in front of the mansion.

Here Mr. Coomber introduced the party to the housekeeper, who very courteously showed them the various rooms, conspicuous for the beautiful carving work and other works of art, besides many curios rich and rare. Tea (which was very generously provided by His Lordship) was served and thoroughly appreciated, after a delightful ramble amid bracing air. Mr. H. R. Farmer moved a very hearty vote of thanks to the Rt. Hon. Lord Llangattock, spoke at some length of his generosity and hospitality. Mr. Malpass seconded in a few well-chosen words. In the absence of His Lordship, Mr. Coomber very ably responded, and spoke in eulogistic terms of his employer's good points.

Mr. J. J. Graham moved a very hearty vote of thanks to Mr. Coomber, to whom, he said, the members felt deeply indebted, inasmuch as he had done all that was possible to make the day what it was—a happy one. Mr. R. Mayne seconded. Mr. Coomber briefly thanked the members for the kind thoughts they had for him. The brakes were now ready to convey the members back to Abergavenny, thence to the station. Cardiff was reached at ten p.m. The party unanimously thanked the Hon. Secretary, who had charge of the arrangements, adding that everyone had most thoroughly enjoyed themselves.—J. JULIAN.

PUBLICATIONS RECEIVED.—"The Orchid Review," July and August. * * "The Century Book of Gardening," parts 15 to 19, Geo. Newnes, Ltd. * * "Luther Burbank, an Appreciation." Reprinted from "Sunset Magazine," San Francisco. * * "Rot in Sheep." Board of Agriculture Leaflet, No. 89. * * "Hop Aphis." Board of Agriculture Leaflet, No. 88. * * "The Journal of the Department of Agriculture of Victoria, Australia," May, 1903; also Index to Vol. I. * * "The Animals' Friend," July, 2d., Geo. Bell and Sons, Covent Garden.



Hardy Fruit Garden.

PEACHES AND NECTARINES.—The midseason varieties are now attaining full size, and the fruits commencing to colour. They must have the benefit of full exposure to light and sunshine, with free access of air among the branches and shoots. To attain this end the growths ought to be carefully laid in, and leaves shading the fruits drawn on one side. As far as possible cut out all superfluous shoots—that is, weakly or ill-placed growths which will be of no use to train in as future bearing shoots. Crowding is detrimental to the fruit, and a great means of preventing the wood ripening as it ought. Further attention must be paid to this when the fruit has been gathered by removing the bearing shoots. Affix nets below the fruit when ripening to prevent the best samples from falling and becoming bruised. Give liquid manure, and a mulching to the late varieties, disposing the shoots thinly, and admitting light to the fruit.

Young trees not yet in bearing must have the branches and shoots disposed so as to well balance the growth. In addition to the removal of weakly shoots, the strong and rampant must be prevented taking too much lead. Cut out all that cannot readily be laid in and prove serviceable. The first opportunity should be taken as soon as trees are clear of fruit to give a thorough syringing. If comparatively clean, clear water only may be used, but infestations of insects require the applications of insecticide.

GOOSEBERRIES.—Free grown bushes ought to be looked over as soon as the fruit has been cleared from them, reducing the crowded interior, and thinning out generally, in order that the ripening of the wood may be facilitated. Cut back the side shoots of cordons on walls or fences if not previously done, leaving three pairs of leaves. After the continued moist weather weeds have grown rankly among fruit bushes, and need prompt removal.

CURRANTS.—The side shoots on the main branches of Red and White Currants are better for being shortened back to a few leaves, as it will help the basal buds, which will produce the fruit to develop. Black Currants may undergo the process of thinning, merely cutting out the old bearing shoots, weakly, crowded, and interlacing branches, and regulating the remainder.

GATHERING EARLY APPLES AND PEARS.—Some of the small early varieties of Apples, including Irish Peach, American Mother, and Mr. Gladstone, may be gathered and eaten direct from the trees on becoming ready to pick. As a rule, Pears ought not to be left on the trees to fully ripen, but gather them when they part readily from the spurs. Spread the fruits out thinly in a box or drawer for a few days when they will be ready for use. Summer Doyenné, Jargonelle, Williams' Bon Chrétien, Citron des Carmes, and Beurré Superfin are good early varieties.

OUTDOOR VINES.—Liberal treatment must be given to ensure the Grapes swelling to their full size, and finishing off with good colour and quality. A free but not crowded growth of laterals may be permitted, keeping them from unduly extending by judicious shortening. Admit plenty of light to white Grapes, black varieties needing more shade to ripen properly. It is assumed that the berries in the bunches have been properly thinned out, and the bunches reduced to a fair number. A mulching of manure over the roots will be appreciated by the Vines, especially should hot, drying weather prevail. Water and liquid manure may be given freely over the mulching.

AUTUMN PRUNING FRUIT TREES.—If there is an opportunity of relieving trees overburdened with crowded wood, the first opportunity may be taken to carry out the work, not waiting until winter, the usual time for pruning and thinning. The present time offers facilities for judging to what extent thinning out is necessary better than winter when the trees are bare of foliage. Trees on which fruit is hanging cannot be dealt with until it is removed, but others which may have had an indifferent, or no crop, are ready for examination. In the case of standard and free growing trees generally much crowded wood and spray in the interior parts of the trees should be removed first. Follow next with the principal branches, carefully effecting the removal of all that do not stand clear, but press into others. When light is excluded fruitful buds cannot form at the base of shoots which make strong efforts to reach the light, and therefore bear only at the extremities. Restricted trees, too, if allowed to retain too many branches or cordons must necessarily have elongated spurs which are usually crowded and unfruitful. It is advisable to thin out these branches to a distance not less than a foot apart, also to shorten the spurs, and thin them out. Whole clusters may be removed, sometimes with advantage.—**EAST KENT.**

Fruit Forcing.

CUCUMBERS.—Old plants bearing from an early part of the season produce fruit about this time with "knobby" ends. These are capital for seed, but they are poor for use. To keep the plants producing straight fruits, old growths should be cut out, and young encouraged. Train this thinly, removing old leaves to make room for new, and stopping at one joint beyond the fruit. The surface soil should be removed, and fresh lumpy loam supplied. Plants in frames may be restored to vigour by a free thinning out of the shoots, supplying fresh loam in lumpy state, and laying a few of the most promising growths at a joint, giving a moderate watering and a sprinkling over the foliage on bright afternoons, closing at about 3 p.m. The autumn fruiting plants must be encouraged to make a strong growth by earthing betimes, applying enough soil each time to cover the protruding roots, and taking care to have the soil moist and warm. Supply water to the roots only when wanted, and give a thorough supply each time. Syringe at 3 p.m., damping in the morning, at noon, and in the evening in bright weather. Maintain a night temperature of 65deg to 70deg, 70deg to 75deg by day, artificially, 80deg to 90deg from sun heat, and close so as to retain 90deg, 95deg, or even 100deg.

MELONS.—In the case of the latest plants the leading shoot should not be stopped until it reaches two-thirds across the trellis, rubbing off the laterals up to the lowest wire, and then every alternate one on opposite sides of the primary. Maintain a temperature of 65deg to 70deg at night, 70deg to 75deg by day, 80deg to 90deg with sun heat, closing early so as to run up to 90deg or even 100deg. Stopping the laterals should not be practised unless the plants are weak, and they do not show fruit at the second or third joint. Weakly plants should have the first shows of fruits removed. Early ventilation and plenty of light are essential.

The last plants in pits and frames are swelling the fruit freely. Earth the roots if necessary, but late plants on manure-heated beds do not require much soil. Close early, affording the needful supplies of water, not allowing the laterals to interfere in any way with the principal leaves. If the weather be dull, afford good linings, and admit a little air, as nothing is so fatal to quality in the fruit as a close atmosphere. Practise sprinkling only in fine afternoons. Gradually withhold water at the roots, and moisture in the atmosphere from plants ripening fruit.

PEACHES AND NECTARINES: EARLY FORCED TREES.

—The leaves will soon be off, but there must not be any attempt to forcibly remove them. When leafless, loosen the trees from the trellis, cleanse the house, attending to needful repairs, and painting the woodwork and trellis. Whatever pruning is necessary should be done as soon as the house is put in order. Dress the trees with an insecticide. In applying insecticides take care to reach every part, and use the brush in such a manner as not to disturb the buds. Trees cleansed and neatly secured to the trellis, look and are better than those left untrimmed until the latest period before starting. Remove the mulching and loose surface soil, giving fresh loam with an admixture of a fifth part of thoroughly decayed manure.

PLANTING OR LIFTING TREES FOR EARLY FORCING.

—Where new houses or fresh trees have to be inserted, and fruit is wanted at an early period, the trees should be planted at as early a time as consistent with safety. The most suitable trees are those that have been trained three or four years under glass or on walls, and have been lifted annually or biennially. Those against walls, if intended for moving, to be started early, might now, especially if there is any tendency to a late growth, or any doubt as to the maturity of the wood and buds, have the soil taken out as deeply as the roots, one-third the distance from the stem that the trees extend, letting the trench remain open for a fortnight or three weeks, when it may be refilled, but do not allow the trees to suffer from insufficient supplies of water whilst the trench is open. This will effectually check the growth and insure its ripening, whilst it will materially assist lifting the trees with a mass of fibrous roots. Plant the trees for early forcing by the end of September.

LIFTING EARLY FORCED TREES should commence as soon as the leaves give indication of falling. Soil and drainage materials ought to be in readiness, so that the work can be performed with dispatch. The mould may consist of any good loam, preferably rather strong and calcareous. Any deficiency of calcareous substances may be overcome by an addition of chalk to sandy soil, and of old mortar rubbish to heavy soil. New borders must have efficient drainage, the bottom of the border being concreted if the strata beneath be unfavourable, or, better, laid with bricks on flat run in cement, the border being enclosed with walls so as to confine the roots, but it must have 3in. drain, with proper fall and outlet, the bottom of the border, whether concrete or cement, falling to the drains. A border one-third the width of the trellis will be sufficient in first instance, and need not at any time exceed the width of the trellis. The best varieties for very early forcing are Early Louise, Stirling Castle, or Royal George Peaches; Cardinal, Early Rivers or Stanwick Elruge Nectarines.

SUCCESSION HOUSES.—When the fruit is gathered cut out all the bearing wood of this season unless forming extensions, and the shoots for next year's fruiting where too crowded should be thinned to admit light and air. Supply water to the roots so as to keep the soil in a moist condition. Weakly trees will be benefited by the application of liquid manure. Ventilate the house fully day and night.

LATE HOUSES.—Let the fruit have full exposure to the light, drawing the leaves aside, and raising depending fruit with its apex to the light or sun by placing laths crosswise of the trellis. Keep the growths tied as they advance in length. Laterals should be kept pinched to one leaf, but in the case of trees carrying heavy crops they may be allowed moderate extension. Continue syringing on fine days in the morning and afternoon until the fruit commences ripening. Provide a little ventilation constantly, and increase it early in the day. See that the borders inside and outside have sufficient water. A light mulching of short, lumpy manure will tend to keep the soil moist. —ST. ALBANS.

THE BEE-KEEPER.

The Wax Moth.

The classification of this insect is at present somewhat unsatisfactory, but there is no doubt that it is embraced by the Heterocera group, one of the two sub-divisions of the Lepidoptera. The female is provided with a long ovipositor similar to that of most of the Microlepidoptera. The larvæ live upon the wax of which the comb is made, and generally exhibit a preference for the bases of the cells or the midriff of the comb, through which in the course of their development they gnaw long passages until the combs fall to pieces and are rendered useless. This tunnel is a sort of protection to the larvæ, as it enables them to move through it with great rapidity, consequently the bees seldom capture it, as in addition to the uncertainty of the position of the larvæ the feet of the bees often become entangled in the fibres of which the channel is composed. Straw skeps lend themselves to the deposition of eggs and production of these insects. The eggs are laid between the hive and the floor board, and immediately it hatches the larvæ feed upon the loose particles of wax found on the floor boards. The long ovipositor also enables the moth to place the eggs in almost any crevice, where it is impossible for the bees to remove them.

"It is curious," says Huber, "to observe how the artful moth know how to profit to the disadvantage of the bees which require much light for seeing objects, and the precaution taken by the latter in reconnoitring and expelling so dangerous an enemy." They contrive to glide unperceived between the sentinels and gain a lodgment in the hive, and when admission has been gained they deposit their eggs in out of the way places. After hatching, which takes place in a few days, they are enclosed in a case of white silky texture, at first like a mere thread, but gradually increasing in size. The larvæ feeds upon the surrounding cells of wax, and during its growth it insinuates itself further along the comb until it is almost eaten away. Immediately the larvæ leaves the pupa stage it becomes a winged moth, therefore in killing it all such comb should be cut out and burned, even if apparently free from moth. This destroys the moth in all its stages.

Not only are these insects a pest to the bee-keeper by spoiling his combs, but they are also enemies to the bees. Their prevalence in a hive indicates weakness of the stock, and as prevention is better than cure a sure remedy is to keep strong colonies. Ligurian bees are also either good protectors or exterminators, as it is a singular fact that they are seldom if ever troubled by them.

Wax moth in all its stages, however, should be destroyed at sight, and where they have obtained a foothold many may be killed in the evening around the hive, where they will be seen hovering about. Clean floorboards, by affording no harbour for them, reduce their chances of existence to a minimum. As a rule, the ravages of the wax moth are confined to spare combs, and the damage is only ascertained in the spring on unpacking supers when they are found tunnelled and broken down, and sometimes are one mass of excrement, which the inexperienced sometimes put down to mice. This is usually the case when left unprotected.

It has been stated that the larvæ cannot exist without moisture, therefore if surplus combs are stored in a dry, airy room they will escape the pest. The time when eggs are laid in supers is between the time of removal from the hive and wrapping up for winter storage. After being cleaned up by the bees the supers should at once be wrapped in two sheets of newspaper without holes, and tied securely. The printers' ink on the newspaper is anti-moth, and if the packing is done as soon as removed from the hive there is little probability of any eggs being laid in them. This method of keeping combs through the winter is always successful. All pieces of old combs scattered

about the apiary should be collected and melted up, and not left lying about. Floorboards should also be scraped at least once during the year. This will do much to prevent the evil.

Where moths have taken possession they must be sought out and destroyed by probing and scraping, afterwards burning all the scrapings and refuse. By this means every vestige of them is destroyed. Facilities for the production of the wax moth are offered by skeps, which, prior to packing for winter, should be examined minutely, and all worms destroyed.—E. E., Sandbach.



* * * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, Mitre Court Chambers, Fleet Street, London, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

PHOTOGRAPHS RECEIVED (Hortus).—Yes, received, with thanks.

ROCK MELONS (H. K.).—Rock and Cantaloup varieties may be successfully cultivated in a house or pit with a bottom heat of 70deg, rising gradually to 80deg. Treat as per our notes under "Work for the Week."

AVERAGE PRICE PER FOOT OF OAK, BIRCH, CHESTNUT, LARCH, AND SCOTCH FIR (F. A.).—The price varies according to locality. Oak is about 2s. per foot. Birch, in large trees, runs about same price or even higher, small trees being scarcely saleable, or not more than 10d. per foot, cabinet-makers being very fastidious as to grain, and only notice the finest examples. Horse Chestnut seldom brings more than 5d., and is hardly saleable, but Spanish Chestnut commands as good a price as Oak, or even more per foot, namely 2s. Larch is worth about 10d. per foot, and Scots Fir difficult to rid at 4½d. Such are the prices given an estate agent as those of several large estates over which he has command of timber sales. As economic trees, Oak, Sycamore, and Ash hold first rank amongst hardwoods, while the softwoods are in some cases scarcely riddable at any price, particularly Scotch Fir.

HARDINESS OF SPARTIUM JUNCEUM (A. T.).—The Spanish Broom (*Spartium junceum*) is quite hardy, and has been used with the greatest success all along the coast, and found an excellent subject for cold, draughty positions. This applies to the seaside, inland being very different, it often, in the northern parts of the country, having its young growth severely cut by keen frosts during a hard winter; indeed, this occurs in the southern parts of England in rich soil and moist positions. Hence it is good practice to cut over the plants each year, shortening or spurring them in the spring, thus securing good growth and bloom each season. We do not think it would be likely to succeed from seeds if sown on poor parts of Arthur's Seat, Edinburgh, as the position is subject to strong, keen winds! Seedlings, however, have a vigorous habit and great adaptability to circumstances. Why not try and ascertain by experience?

AVERAGE PRICE PER YARD FOR BARBED WIRE FENCING? WHAT THE COST OF ERECTION? (Landsman).

—The price per yard varies with the height and number of wires, also number of standards and droppers. Three and a half feet high 3-barb wires, standards 20ft apart, without intermediate droppers, 9d. per yard; with one intermediate dropper, 10d. per yard; with two intermediate droppers, 11d. per yard. Four feet high, 4-barb wires, 10½d., 11½d., 1s. 0½d. per yard; 4½ft high 5-barb wires, 11½d., 1s. 0½d., 1s. 1½d. per yard; 4½ft 6-barb wires, 1s. 1d., 1s. 2½d., and 1s. 3d. per yard; 5ft high 6-barb wires, 1s. 2d., 1s. 3½d., and 1s. 5d. per yard. These are for standards 20ft apart in each case, without intermediate droppers, with one intermediate dropper, and with two intermediate droppers respectively. The standards are of angle iron, go 18in into the ground for fences up to 4ft high, and 21 inches for the 4½ft and 5ft fences. Wind-ing pillars are not included in the prices, they requiring to be placed every 150 yards apart. Prices for straining pillars, for fences 3½ft and 4ft above ground, £1 12s. 6d. each; for 4½ft and 5ft, £1 15s. Barbed gates with match fences, £1 8s. each. The cost of erection varies according to locality and distance from place of supply, so that no estimate can be given other than by the suppliers, who gladly state particulars on application, and varies also with fence, and may range from 1½d. to 6d., according to circumstances.

BOOK DEALING WITH COMPENSATION (Landlord).—Secure the book entitled "Landlord and Tenant," price 1s., from W. Clowes and Son, Ltd., 7, Fleet Street, London.

BACK COPY (1889) OF THIS JOURNAL (G. B.).—We are sorry to inform you that no copies exist back so far. The report you refer to is in our issue of November 28, 1889, and any one of your acquaintances with a bound volume of that date may lend it to you.

NAMES OF PLANTS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (Hortus).—1, the Cypress Spurge (*Euphorbia cyparissias*); 2, *Potentilla* sp.; 3, *Spiræa albiflora*; 4, *Erica vagans*, or Cornish Heath; 5, *Erica vulgaris aurea*; 6 and 7, next week. (F. T.).—1, *Cobæa scandens*; 2, *Cissus* (or *Vitis*) *discolor*. (J. J. B.).—1, the Abele or White Poplar (*Populus alba*); 2, the Tulip Tree (*Liriodendron tulipifera*); 3, *Acer platanoides* *Schwedleri*, a most telling subject in the landscape; 4, *Acer Negundo variegata*. (M. A.).—The yellow Water Lily (*Nuphar lutea*).

Trade Notes.

The attention of readers might be drawn to Messrs. Barr and Sons' new Daffodil catalogue for this season, and to their collections of new varieties for 1903 on pages 11 to 14. The beautiful new hybrids are the result of many years of labour in cross hybridising, and are great advances in the Daffodil family. Peter Barr is the largest and purest white trumpet Daffodil yet raised. On pages 3 and 4 are given valuable practical hints to amateurs on the cultivation of the Daffodil, which should be read by all growers of this favourite spring flower.

Sutton's Bulb Catalogue.

Sutton's list of bulbs is always an extremely attractive publication, and this year's edition opens with a most interesting article on the value of bulbs for the decoration of halls, corridors, rooms and glass structures during the winter months. Colour schemes are also described for producing magnificent harmonies and contrasts with various classes of flowers. Some of the numerous illustrations afford excellent examples of successful grouping for the adornment of homes; others show effective contrasts in the treatment of beds and borders. The work is admirably printed, and it is bound in an artistic cover, and produced in the highest style of lithography.

Trade Catalogues Received.

Barr and Sons, 11, 12, and 13, King Street, Covent Garden, London.—*Daffodils, List of Crocuses, &c.*

Wm. Bull and Sons, King's Road, Chelsea, London.—*Bulbs.*

Dickson and Robinson, Manchester.—*Bulbs and Roses.*

Dicksons and Sons, 1, Waterloo Place, Edinburgh.—*Bulbs.*

Dobbie and Mason, 22, Oak Street, Manchester.—*Bulbs.*

F. C. Edwards, 12 to 15, Warehouse Hill, Call Lane, Leeds.—*Bulbs.*

William Paul and Son, Waltham Cross, Herts.—*Bulbs, Camellias, Shrubs for Forcing, &c.*

Amos Perry, Winchmore Hill, London, N.—*Bulb List.*

L. Späth, Berlin.—*Bulbs.*

Sutton and Sons, Reading.—*Bulbs.*

Covent Garden Market.—August 19th.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, Italian, per pad	6	0 to 0	Oranges, case	10	0 to 15
„ cooking, bush.	6	0	Pears, Williams, 48's,		
„ dessert, ½ bush.	5	0	per case	6	0
Bananas	10	0	Pines, St. Michael's	3	6
Grapes, Alicante, lb.	1	0	Plums, Rivers', ½-sieve	8	0
„ Hamburgh	1	0	„ Orleans, „	9	0
Lemons, Messina, case	10	0			

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2	0 to 0	Leeks, bunch	0	2 to 0
„ Jerusalem, sieve	1	6	Lettuce, Cabbage, doz.	1	0
Batavia, doz.	2	0	Mushrooms, forced, lb.	1	0
Beet, red, doz.	0	6	Mustard & Cress, doz.		
Cabbages, Spring, tally	2	0	punnets	1	6
Carrots, bunch	0	2	Onions, bushel	3	0
Cauliflowers, doz.	2	0	Parsley, doz. bnchs.	2	0
Corn Salad, strike	1	0	Peas, bushel	4	0
Cos Lettuce, doz.	1	0	Potatoes, cwt.	5	0
Cucumbers doz.	3	0	Radishes, doz.	0	9
Endive, doz.	1	6	Scarlet Runners, bush.	4	0
Herbs, bunch	0	2	Spinach, bush.	2	0
Horseradish, bunch	1	3	Tomatoes, English, lb.	0	3
			Turnips, bnch.	0	0

Average Wholesale Prices.—Plants in Pots

Most of the undermentioned plants are sold in 48 and 32-sized pot

	s. d.	s. d.		s. d.	s. d.
Aralias, doz.	5	0 to 12	Grevilleas, 48's, doz.	5	0 to 0
Araucaria, doz.	12	0	Heliotrope	6	0
Aspidistra, doz.	18	0	Hydrangeas, pink	10	0
Crotons, doz.	18	0	„ white	10	0
Cyperus alternifolius			Lycopodiums, doz.	3	0
doz.	4	0	Marguerite Daisy, doz.	6	0
Dracæna, var., doz.	12	0	Myrtles, doz.	6	0
„ viridis, doz.	9	0	Palms, in var., doz.	15	0
Ferns, var., doz.	4	0	„ specimens	21	0
„ small, 100	10	0	Pandanus Veitchi, 48's,		
Ficus elastica, doz.	9	0	doz.	24	0
Foliage plants, var, each	1	0	Pelargoniums	8	0
Geraniums, doz.	4	0	Shrubs, in pots	4	0
„ Ivy, doz.	6	0			

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.
Arums, doz.	1	0 to 2	Maidenhair Fern, doz.		
Asparagus, Fern, bnch.	1	0	bnchs.	3	0 to 4
Carnations, 12 blooms	0	6	Marguerites, white,		
Cattleyas, doz.	10	0	doz. bnchs.	1	0
Croton foliage, bun.	0	9	„ yellow, doz. bnchs.	1	0
Cycas leaves, each	0	9	Myrtle, English, bunch	0	6
Eucharis, doz.	1	0	Odontoglossums	4	0
Gardenias, doz.	1	0	Orange blossom, bunch	2	0
Geranium, scarlet, doz.			Roses, Niphetos, white,		
bnchs.	3	0	doz.	1	0
Gladiolus, The Bride,			„ pink, doz.	2	0
doz. bun.	4	0	„ yellow, doz. (Perles)	1	6
Ivy leaves, doz. bun.	1	6	„ Liberty, doz.	2	0
Lilium Harrisii	1	6	„ Generals	1	6
Lily of Valley, 12 bnchs	9	0	Smilax, bunch	3	0
			Stephanotis, doz.	2	0



Fifty Years of Agricultural Wages.

We have a great respect for officially compiled figures. The lapses of memory are many, and often it is only facts of great interest that stand out alone and clear. With regard to the "good old times" of our forefathers we suffer many delusions. Those "good old times," could they return, would most woefully disappoint us. That they had their excellencies there is no doubt; but to many folks the days of long ago will recall only privations, and those of a most painful sort. Shall we be wrong when we aver that an empty stomach may be classed among the sharpest of trials; and, next to that, an empty mind? Then there have always been some who, soaring above the squalor of daily life, found time and means to satisfy the mind, and to become lights that lighten the many.

Mr. Wilson Fox has been preparing an analysis of the rise and fall of agricultural wages during the last fifty years. A glance at these statistics is not only interesting, but most instructive. There have been slight fluctuations since 1850, but the rise in wages has been steadily maintained and, at the same time, the fall in the prices of goods and clothes has also been steady; thus it is that the purchasing powers of £1 (sovereign) are greater now than they were in 1850. And yet, in the face of this, there are foolish people who delight in exciting the evil passions of the ignorant with the parrot cry of "the dear loaf." There is not such a thing, thank God! nor has there been for many a year.

It is pitiful to read of the low rate of wages in the early fifties, when the average weekly earnings of the farm labourer would reach less than 10s. We believe that in the northern counties they never were at that figure. The north has always led the way with regard to good wages, partly because north country agriculturists were, from their superior methods, better able to pay a sound wage, and partly because of the existence of other industries (coal and iron), which caused a healthy competition. Where money circulates money sticks. The money must be somewhere about if folk are to get hold of it. We don't want to appear to disparage the southern workman; but the north country man is better physically and mentally. This is in a great

measure the result of generations of better feeding and better education, combined with much natural shrewdness and acumen. He is a quicker worker, a more adaptive man, rather inclined to value himself highly. There is nothing like having a good opinion of oneself. If you mean to get on have a good opinion of yourself, and make your work such as will justify that good opinion in the eyes of your employer.

In our own limited experience we have known so many cases where an employer going south found it absolutely impossible to get his work done either as quickly or as well by the southern labourer, as by the men he had left behind. His only way out of the difficulty has been to import some of his old labourers and by degrees to train the new men, with better methods. We soon find out a Scotchman by his accent, but the accent of a northern labourer is not so pronounced, and therefore his presence is not so quickly detected.

The high price of corn during the Crimean war caused a corresponding rise in wages—the old standard, with modifications, was a day's wage = stone of flour, and the upward movement was maintained and intensified during the Franco-German war. Then came our Civil War, if we may speak of it as such, where Joseph Arch was the labour leader against the landowners and farmers. This kept wages high until 1879, when prices went tumbling down and crops were ruined by a wet, cold summer, and a harvest untowardly late. The farmers were hard hit, and the labourer, through them, was hit too.

In 1889 things looked a little brighter, and wages rose again, and so far have kept at a steady figure, not because the farmer can afford it, but simply because labour is scarce and he is obliged to have men at any price, as, spite of all labour-saving appliances, there is still work that the genus homo alone can do. The wages now average 17s. to 18s. per week, and a good man need never be out of employment.

The usual system with the married men is engagement by the year, and the wage is paid without deductions for wet days or ordinary sickness. This means a great deal, as we have found to our cost once or twice, when we have had a man laid up for so long a period as three months. The advantage to the farmer lies in securing efficient workers all the year round, and he is not dependent on the casual and often very unsatisfactory workman. It is the custom to hire young unmarried men also by the year, and to board them in the house of the foreman hind, or farm bailiff, as he is called, according to the neighbourhood in which he is found. These lads are well fed, well housed, and, above all, well paid, and if they ever have a chance of saving, and they should save, it is at this period of their lives. We have only been speaking now of the rank and file of agricultural labourers; not the head craftsmen, as we may term the bailiff, shepherd, or herdsman. These men, by reason of their office, receive much better pay; indeed, it is a question not so much of money as of men. A bailiff or foreman has the difficult task of making all under him work in unison. He often has a voice in the choice of men, and he it is who under the master plans out the day's work, with the view of doing the most necessary thing first, and to take advantage of every exigency of weather. As to a shepherd where a high-class breeding stock is kept, his wages would make many a man green with envy; indeed, the worthy flock is not put off with an attendant of much less rank than a Nestor metaphorically speaking—a man of special training and great experience. We have often heard it stated that So-and-So would never make the prices he does for his sheep were it not for Thomas, or Robert, or William, as the case may be. Naturally, their office is no sinecure, and they fully earn their handsome wage. The same applies also to those men whose masters own pedigree cattle, or who "go in" for the best shire blood. Once a farmer gets hold of the right man he is a fixture; that is, if money will keep him.

We have before us while we write extracts from a farmer's wage-book, both in N. Yorkshire and Durham. In 1851 the weekly wage of a yearly man averaged £30 per annum; in 1901 it had risen to £43 in Yorkshire. In Durham the wages of 1851 was a trifle higher, i.e., £31 per annum; in 1901, £55. In both cases cottage and garden free, with potatoes and coal, and in many instances milk.

The labourer of to-day makes a complaint as to extra expense in the clothing of children for school attendance. True, he has this to do, but at the same time he has no school fee, and clothing of all sorts is marvellously cheap, and the average number of the children per family is very much less.

We were surprised the other day when we reckoned up the small number of children to be found in one half of a large agricultural village. We fancy it may be that so many of the young married folks go off to the large centres, leaving the village for the middle-aged, whose families are grown up. We seldom hear of families now whose numbers run into two figures. We have a neighbour, a hard-working woman, who was one of eighteen, and the greater part of these eighteen attained man's estate; but, as the woman says, she and her brothers and sisters knew the sharp pangs of constant hunger, though their father was never out of work, and their mother added to the family treasury by taking in washing. This family are rather above the average in size and breadth, and so, evidently, unpleasant though the semi-starvation was in their youth, it has not certainly tended to dwarf them in after life. This may be because as soon as a master or mistress could be found the children were sent off to some farm-house where there was at least rough plenty, and fresh air in abundance.

We do not like to think of the children of hard-working parents as under-fed, but now, with best flour at 1s. 3d. per stone, that, at least, can never occur. Flour at 1s. 3d. per stone, as against 7s. per stone early in the nineteenth century!—3 stones for £1 1s. ! How did the poor live? Of course, white bread was an unknown luxury, and now bread and cakes and pies of "superfine" find their way to every table in the country. Foreign commodities are in every village shop, and find a ready sale. We mean here not the simple tea, sugar, and spices, but meats, fish, choice fruits of every variety; so that the workman's food is not only good, but also varies.

There is in some neighbourhoods an outcry for more milk; yet in villages where every encouragement for cow-keeping is given, the men are very apathetic on the matter. What they would like is that the master should keep cows, and supply them at wholesale prices. But the master is more inclined to sell by the gallon than by the pint, and get his money in the lump sum; or, if he does not do that, he prefers to butter or cheese what he can spare after supplying his own wants. He, too, is quite as anxious as the labourer to lessen work, and his money difficulties are far more acute.

Work on the Home Farm.

Grain crops are ripening rapidly under the influence of sunshine and wind, and a gale the other day frightened us somewhat, for the Standwell and Goldthorpe Barleys were almost forward enough to be in danger of necking. No harm was done except to a few early Oats, and that only slight.

Wheat is very well developed in the berry, and will not stand to be very ripe without risk. Nothing is gained by letting it stand so long, and it may be cut when convenient. One rule we have always followed in deciding as to the fitness of Wheat for reaping, viz., to wait until the most backward ears could be rubbed out or threshed between the hands without bruising any of the grains. Another plan is to cut when no milky liquid can be squeezed from any of the grains.

Before the new weak-necked Barleys were introduced it was an agricultural axiom that Barley must not be cut before it is fully ripe. These Barleys must be cut much greener to save them from necking in a gale, but Chevalier and its kindred are still better left to be quite hard in the grain. We often see Oats cut too green. Farmers see a grain or two missing from the top of an ear, and hurry up at once with the reaper. The loss of a few grains must be submitted to if we are to allow the much more numerous grains lower down a chance to fill properly. How many samples of Oats are spoilt by containing thin, half-ripened grains. The corn factor reminds us when we have not given our Oats time enough to mature, but the seconds bag at the threshing machine tail would tell us more if it could speak. Well, we are ready when the corn is.

Turnip cleaning is just finished, and the horse hoes are going over them once more. We are also skerrying the Mangolds; there is not much room between the rows, but there are a few big weeds. They should have been killed before, as an old neighbour of ours says a small boy is more easily knocked down than a grown man.

Late Potatoes look almost too well, the haulm is immense, but very little progress has been made underground. British Queens are a fine crop, and should prove remunerative.

Sheep are doing well; the fine weather is grand for the lambs, which have quite recovered from the loss of their mother's milk. We saw a lot unweaned the other day—it is bad for the ewes, and no advantage to the lambs.

A good deal of orchard fruit is grown about here. The crop is an utter failure, there being no Plums or Pears, and very few Apples. It will be a very bad year for the small farmer in consequence.

ESTABLISHED 1832.

No connection with any other firm of a similar name.

Successors to the late BARON VAN PALLANDT.

ANT.
ROOZEN
& SON'S

SPLENDID

**HYACINTHS,
TULIPS,**

AND ALL OTHER

DUTCH, CAPE AND EXOTIC
BULBS & PLANTS

Our Descriptive CATALOGUE of the above, containing
FULL CULTURAL DIRECTIONS and particulars as to
FREE DELIVERY, will be sent post free on application
to our Offices at OVERVEEN, HAARLEM, HOLLAND, or
to our General Agents—

Messrs. MERTENS & CO.,
3, CROSS LANE, LONDON, E.C.

BY SPECIAL
APPOINTMENTTO HIS MAJESTY
THE KING.**ORCHIDS—ORCHIDS**

QUANTITY IMMENSE.

Inspection of our Range of Houses
IS CORDIALLY INVITED BY

HUGH LOW & CO., BUSH HILL PARK,
MIDDLESEX.

TO THE TRADE!

DUTCH BULBS

FRENCH BULBS! and ENGLISH BULBS!

SEE OUR SPECIAL CATALOGUE OF BULBS.

Containing List of all the Best Varieties of HYACINTHS,
TULIPS, CROCUS, LILiums, DAFFODILS, SNOW-
DROPS, IRIS, PEONIES, &c., free on application. Please
compare our prices before sending your orders abroad.

WATKINS & SIMPSON,

SEED AND BULB MERCHANTS,
12, TAVISTOCK ST., COVENT GARDEN, LONDON, W.C.

The Royal Nurseries, Maidstone, Kent.

GEORGE BUNYARD & CO., Ltd.,

Are now Booking Orders for early delivery of the
very best

NEW AND
OLD **STRAWBERRIES**

In pots for forcing, or as runners for open culture
true to name.

They offer the Largest Stock and the Best Plants in
the Trade.

REVISED CATALOGUE, including the New
Perpetual Bearing Kinds, now ready, free.

No. 1209.—VOL. XLVII., THIRD SERIES.

CLIBRANS**BULB CATALOGUE**

Contains a choice and select List of all the
best varieties of Bulbs for indoor and
outdoor growth; descriptive and priced.

GRATIS AND POST FREE.

CLIBRANS**STRAWBERRY LIST**

The newest and best novelties and all choice
and standard varieties are described and
priced; cultural hints, &c.

GRATIS AND POST FREE.

ALTRINCHAM & MANCHESTER**STRAWBERRY PLANTS****H. CANNELL & SONS**

Beg to announce their New List, also **BULBS**,
(sent free) of just the cream of the many varieties
now cultivated. Apparently there never was a
better season, for our runner plants are excep-
tionally fine (30,000), layered in pots, and any
quantity of ordinary runners. Our neighbourhood
is well known as the home for these and all other
hardy fruits, and our cultural directions always
lead to success.

SWANLEY, KENT.

1,500,000	BULBS.
Spanish Iris, Yellow, White, and Blue	7/6 per 1000.
Crocus, all colors	5/6 per 1000.
Sir Watkin Narcissus	5/6 per 100.
Horsefieldii	5/6 per 100.
Trumpet Narcissus	7/6 per 1000.
Glory of Leiden Narcissus	6d. each.
Madam de Graaff	3/6 each.
Sweet Scented Pheasant Eye	
Narcissus	5/6 & 7/6 per 1000.
Mixed Narcissus	5/6 per 1000.
Double Daffodils	5/6 & 10/6 per 1000.
Tulips, Mixed (choice)	2/6 per 100.
Single Lent Lilies	3/6 per 1000.
Snowdrops	5/6 & 7/6 per 1000.
Strawberry Plants	1/6 per 100.

Cross & Son, Daffodil Nurseries, Wisbech.

H HEATING APPARATUS for Greenhouses and
other Buildings. Catalogue free of all kinds of Hot-
water Pipes, Wrought and Cast Iron Boilers, Radiators,
Cisterns, Pumps, Baths, &c.—JONES & ATTWOOD,
Stourbridge.

VINE CULTURE UNDER GLASS.

By J. R. PEARSON. Price 1/- post free, 1/1
Office: 12, MITRE COURT CHAMBERS, FLEET STREET E.C.

P PURE WOOD CHARCOAL, Specially Prepared
for Horticultural use. Extract from the *Journal of
Horticulture*: "Charcoal is invaluable as a manurial agent;
each little piece is a pantry full of the good things of this
life. There is no cultivated plant which is not benefited by
having Charcoal applied to the soil in which it is rooted.
Apply for Pamphlet and prices to the Manufacturers—
HIRST, BROOKE & HIRST, Ltd., Leeds.

*Journal of Horticulture.*

THURSDAY, AUGUST 27, 1903.

Action.

It has been said that every true
gardener is "a bit of a philo-
sopher," and it cannot, I think,
be doubted that the comparative
solitude in which many spend
their lives is conducive to thought;
but whether that thought is directed
toward solving the problems which crop
up in connection with the daily work, or
toward reasoning as to cause and effect in
things in general, depends greatly upon the
individual, yet each, though possessing a dis-
tinctly different turn of mind, may be a true
gardener.

A certain degree of thoughtfulness is un-
doubtedly absolutely necessary to the young
man who wishes to become a successful gar-
dener, but it is certainly not essential that it
should run in the deep groove which tends to
make the philosopher, who weighs everything
in the balance, and investigates again and again
before becoming sufficiently convinced to put
what may prove a valuable idea into practice.
Life is too short for the gardener to be his own
philosopher, and the man who attempts to do
it only dreams away valuable time, while the
practical individual who combines thought
with action forges ahead. The great desider-
atum to-day in almost any walk of life seems
to be intelligent action.

Throughout all the ages which have rolled
away since the dawn of human life upon this
planet, there never was a time when so many
great and trained intellects were devoting their
energies to the unravelling of the mysteries
which surround us in every walk of life, and in
the application of science to horticulture and
agriculture great strides have been made during
the last five years. What at the present time
is more necessary than anything else in con-
nection with gardening is that we should each
keep up-to-date in regard to the discoveries

R READERS are requested to send notices of Gardening
Appointments or Notes of Horticultural Interest,
intimations of Meetings, Queries, and all Articles for
Publication, officially to "THE EDITOR," at
12, Mitre Court Chambers, Fleet Street,
London, E.C., and to no other person and to no other
address.

which are being constantly made, and as far as possible regulate our practice by such advanced knowledge.

Some men are naturally of such a practical turn of mind as to have the knack of making the fullest use of every atom of knowledge they do possess, while others are studious and thoughtful, but are not "men of action" in that sense which causes them to gain knowledge only for the purpose of putting it into action. Most of us have heard of the ancient gardener who was a great authority on all matters connected with his calling, especially in regard to Grape growing. His employer was one day visiting a neighbouring place where the gardener was quite a humble individual, but grew grand Grapes. The employer in question was so struck with their superiority over those grown in his own establishment that he engaged the modest Grape grower, and dispensed with the services of the "great authority."

The vital point to bear in mind is that with the majority of employers a gardener is judged by the results he achieves. They require plenty of flowers, fruit, and vegetables throughout the year, and like the gardens kept in as fine a condition as the resources at command will allow, and the man who succeeds the best under the circumstances is held in the highest esteem. When there has been no cutting down of labour and other expenses this method of estimating the capabilities of a gardener is, of course, perfectly fair, but unfortunately sometimes a man is expected to do as well as his predecessor when great reductions have been made. And this is where a great deal of unfairness comes in. In either case, however, the man who possesses a temperament in which thought and action are well balanced, will invariably succeed better than one in whom either quality predominates at the expense of the other.

Now that so many schools of horticulture have been started, and so many opportunities exist for all to obtain instruction in the theory of gardening, it is quite possible for the young to overlook the necessity for action—constant endeavour—in practical work; and although I have always been a consistent advocate for scientific knowledge in connection with gardening, yet I also know full well that the highest honours obtained in theory will bring the winner but little success along the thorny path of practice, which leads to posts of responsibility, unless the successful student has also that untiring energy that makes constant activity a pleasure. To the man, and perhaps woman too, who studies closely to keep up with the times, and who will also work with the thoroughness of the gardeners of old, there are to-day hosts of opportunities; but for those who *know* so much and *do* so little, the twentieth century will prove a barren desert to traverse.—ONWARD.

Wallflowers.

Old-fashioned Wallflowers, growing almost wild, were the admiration of our fathers, and often one has seen them among the ruins of some old castle, their fragrance and brilliant colours giving a romantic touch to the surroundings. Seeds sown over walls produce plants in the crevices. One marvels at the advancement that has been made in the size of bloom and richness of colourings, while still retaining the delicious fragrance of the original. Being useful for pot culture or window boxes, making splendid beds or borders, or used for naturalising in shrubberies, ditch banks, wild gardens, &c., they are adaptable to almost any use; while for cutting at a time when flowers are none too plentiful they are invaluable. It is not everyone who is acquainted with the variety of shades of colour now obtainable, as one does not often see any but the ordinary blood red and yellow kinds. Among the lesser known may be mentioned as worthy of cultivation the following few varieties:

Ruby Gem is a shade of rich ruby violet, with a satin-like sheen; planted in masses it gives a very fine effect. Eastern Queen, quite distinct, a charming apricot shade that changes to a light salmon red as the flower becomes full. Vulcan, a new dwarf growing variety producing very large flowers of an exceedingly rich velvety crimson hue, which will undoubtedly become a great favourite. Primrose Dame, sulphur coloured, of dwarf habit, being very useful where a pale yellow is required. For an effective yellow Pure Gold, a rich golden shade, is unsurpassed. Another good yellow is Cloth of Gold, the flowers being large and colour pleasing. Golden Monarch is a new yellow, a deep golden, its bold spikes contrasting well with the equally rich Vulcan. Harbinger is a favourite red of a bright shade. The Moor, a dark brown, is a compact grower, which may be treated as an annual if sown early in the year, or when sown late in the season will come into bloom in February.—J. W. J., Oswestry.



The Travels of an Orchid Hunter.

The matter hereunder printed is taken from Albert Millican's book entitled "Travels and Adventures of an Orchid Hunter," and was published in 1891 by Messrs. Cassell and Co. We reviewed the work at some length, and on taking the book from a shelf recently, it seemed to us that some passages were of keen interest and value to the practical cultivator; hence the excerpts. In his work, the author describes his exploration of the valley of the Magdalena River, and to Bogota, the capital of Colombia, in South America. Bogota is set high up in the Andes, and is a most enticing city.

"The next place of interest in the neighbourhood is the village called La Palma. This is two and a half days' journey on mules from the emerald mines in a north-westerly direction, being situated much lower than the *Odontoglossum crispum* district. The adjoining hills produce most splendid forms of *Cattleya Warscewiczii*. The ride is most enjoyable, the track lying through most beautiful scenery, especially along the banks of one small stream, where the trees are literally covered with *Cattleya labiata*. When I passed that way a large number of them were in flower, presenting a sight of indescribable Orchid beauty. Further along I met with a pretty delicate variety of *Compactia* hung on the very tips of the branches of a kind of Willow overhanging the water, so near that in the rainy season they must be submerged, while the majority of them must always be wet with spray. The village of La Palma is one of the best of the old Spanish style, most curiously situated in a hollow of the tops of the mountains, which look like extinct volcanoes. The people are remarkably hospitable, and receive all travellers with the greatest kindness. Unhappily, the magnificent varieties of *Warscewiczii* have been cleared away from the neighbourhood long ago, and now, as in other parts, the Orchid collector must take a journey of at least two days into the heart of the forest to get his plants, or send someone and wait three weeks in idleness and suspense in a monotonous village. The track into the forest is miserably bad, and to reach the plants is even dangerous; but those who have seen them in their forest home in all the glory of *Cattleya Warscewiczii* will admit with me that the sight is worth all the trouble of forest life. When I say that the sight of the plant in flower is very beautiful, Orchid fanciers at home will imagine that large quantities are to be seen in bloom at once. This is not generally the case with any class of Orchids I have seen in their native woods; it is rare to see a tree with more than four or five plants, and these perhaps not all in flower at once; but in the good districts, before the plants were taken away so much, almost every tree and ledge of rock would have some one or more specimens in bloom, so that a large quantity might be seen in the course of one day.

"Near La Palma, but on higher, cooler ground, I found a few small plants of *Miltonia Phalaenopsis*, and in another locality quite a clump of *Oncidium Kramerianum*, as well as *Chysis*, *Bolleas*, and various *Oncidiums*. The vicinity of Muzo, near the emerald mine, is where I have found the largest quantity of the glorious Blue Butterfly (*Morpho Cypris*), some of them measuring 7in across the wings, of a radiant blue that few artists' pencils can depict. Although *Cattleya Warscewiczii* is exported largely from La Palma, it is also found growing, mixed with *Cattleya Dowiana aurea*, in the State of Antioquia. I have collected *Odontoglossum Pescatorei* in the hills near to Ocaña, in the Department of Santander; but it would be wearisome to my readers to enumerate all that occurs in the tiresome ten days of riding over the Andes from the town of Bucaramanga to the *Pescatorei* grounds. On the top of one of the high mountains on the way, near a village called Cachiri, near Bogota in Colombia, at a height of 10,000ft above the sea-level, I passed on the side of the track thousands of *Masdevallias*, chiefly of the *Harryana* variety. On another hill, two days' journey further along, but much lower, the trees are hung to crowding with the dainty little *Oncidium cucullatum*. Any future novice Orchid hunter in search of *Odontoglossum Pescatorei*, will find it by leaving the town of Ocaña, passing across the magnificent plains called La Savanna de la Cruz, and entering the chain of the Andes on the western side. Here, amongst the matted, moss-grown vegetation, *Pescatorei* is growing side by side with *Odontoglossum triumphans*, while the creeping rhizomes of *Odontoglossum coronarium* cover the roots of the same trees. I have seen the curious *Anguloa Clowesi* and the pretty *Ada aurantiaca* here as well, while in the cooler parts that choice little *Odontoglossum blandum* grows in profusion in a peculiar mist which reminds one of a continual Turkish bath. It is all very well to see this fastidious little Orchid in its natural beauty, but it is quite another thing to succeed in bringing it home to England alive. Many of the plants die before they leave the coast, many more before they pass the West Indies; a few reach the Azores, and fewer still arrive in England safely.

Cattleya atalanta superba.

The hybrid (from *C. guttata* Leopoldi and *C. Warscewiczii*) was staged by Messrs. James Veitch and Sons, Ltd., of Chelsea, on August 4, in the Drill Hall meeting of the R.H.S., when an award of merit was accorded. The sepals and petals are rosy purple, while the lip is richer and deeper purple. It is one of the handsomest varieties seen for a considerable time.

The Week's Cultural Notes.

I

One of the most deceptive of Orchids in appearance is *Saccolabium giganteum*, its large, fleshy leaves and strong habit giving the inexperienced an impression at first sight that it must be a very easily grown subject, one kept in health without any difficulty. But this is not the fact, as cultivators have found to their cost. Perhaps the principal reason is that it flowers, and flowers very profusely, in the middle of winter, when the energies of the plant are at its lowest ebb, and when the climatic conditions outside make it very difficult to maintain a congenial atmosphere in the warm houses.

It behoves those in charge of it, then, to make the most of the growing season with it, and to prepare it now while the weather is suitable for the strain of flowering later on. A brisk moist temperature by day, running up on fine afternoons to 90deg or 100deg, with ample sunlight and judicious ventilation, will produce free yet solid growth, and this is the desideratum. Immature growth, rushed on in strong heat and moisture, is the kind that falls a prey to spot, that dread scourge of distichous-leaved Orchids. Plants so treated soon go wrong, the foliage drooping in early spring, and the spike of flower being poor and washy in colour.

The Golden Chain Orchid, as *Platyclinis filiforme* is popularly known, is now fully in flower, and apt to be thoughtlessly treated. At the time the

blossoms open the pseudo-bulbs are only partly grown, and to place the plants about in draughty passages or corridors, or even in the conservatory, is to court defeat. The flowers last a little longer, it is true, but the pseudo-bulbs are badly checked. The best plan is to keep them in a dry part of the house in which they are grown, avoiding syringing in their immediate locality, and as soon as the flowers are past their best to cut them, and return the plants at once to their growing quarters.

Imported plants of *Odontoglossum Harryanum*, *O. grande*, and others that are pushing flower spikes, should have these removed to avoid injury to the plants, or at least they should only be allowed to carry one or two flowers to perfection, just to show what the variety is like. The former especially is easily injured in this way, many fine plants having been reduced to an almost flaccid state by the strain of flowering before being properly established. They are in most cases sufficiently weakened by their journey home, and when further depleted of energy by premature blossoming, I do not envy anyone the task of restoring them to health and vigour.—H. R. R.

The Boom in Orchids.

Anyone visiting the English flower market at Covent Garden will be surprised at nothing more than the profuse display of Orchids on sale as cut bloom in spikes and in full flower in pots. Amongst a few of the prettiest specimens on show at the present time, we were particularly struck with the following:—*Cymbidiums*, from 2s. 6d. to 3s. a dozen blooms; *Cœlogynes*, from 2s. to 3s.; *Lælias*, from 3s. to 5s.; *Odontoglossums*, 2s. to 4s.; *O. crispum* and *O. Pescatorei* being very fine indeed. The *Cattleyas* are high priced, being worth from 12s. to 18s. a dozen blooms. *O. Alexandræ* formed a leading line in these popular Orchids, and, as usual, was well to the fore. For growing in a house with Carnations, with a night temperature of 55 to 57deg., *Cypripedium insigne*, *C. Lawrenceanum*, and *C. Spicerianum* will be found excellent. So will *Cœlogyne cristata*, *Lælia anceps*, *Odontoglossum citrosum*, *O. grande*, *O. crispum*, *O. Insleayi*, and *O. Rossi*.

maius, and *Oncidium crispum*. The culture of these Orchids is by no means difficult. In brief, they need watering in winter only when they are dry. In the spring and summer, when they are growing, they should be syringed and watered freely. They should also be shaded from the hot sun. Pot Orchids do well in rooting material made up of equal parts of peat and sphagnum moss, and the pots should be quite half full of drainage. Orchids ought to be freely grown by the million. Most of the cheapest varieties need no more skill to flower them to perfection than the best strains of *Cyclamens* require. As the roots or bulbs can be purchased as cheaply as 2s. 6d. and 5s. each, Orchid culture cannot fail to increase in popularity.—(Western Morning News.)

Cœlogyne Dayana
with 436 blooms.

A remarkable specimen Orchid, which secured the silver medal of the Massachusetts Horticultural Society, was exhibited in Horticultural

Hall, Boston, on May 23. It was a single plant of the *Cœlogyne Dayana*, and had 486 blossoms. It was grown in the conservatory of Mr. W. P. Winsor of Fairhaven, by P. Murray, gardener.

American Society for Horticultural Science

A movement is on foot to establish in the United States a society for horticultural science. Professor Beach, of the New York Experiment Station, Geneva, N.Y., is an active promoter of the society, and those interested should address him for particulars. The object of the society is to more fully establish horticulture on a scientific basis. The membership would naturally be made up of the horticulturists of the experiment stations and of the United States Department of Agriculture, together with other scientists whose work has a horticultural bearing. The meetings would be held in connection with those of some kindred society, as the American Pomological Society or the American Association for the Advancement of Science.



Cattleya atalanta superba.



Feeding Planted-out Stock.

The question of when, how and what to feed his plants is often the most difficult problem confronting the novice. When to feed is a question that the condition of the plants themselves will best answer. As long as they are keeping a dark, healthy green and making large foliage they will not need feeding to any extent. We generally commence feeding about ten weeks after planting, which is, say, by August 1. At this time a top-dressing of bonemeal and rotten manure is applied, and from then on liquid manure is constantly given. Some growers think it better not to feed before the bud is set, but while, as before stated, you must be guided by your plants, whether the bud is set or not is of little importance if the plants are needing nourishment. We always use a Kinney pump in applying liquid fertilisers, and find it saves much labour. We use chiefly sheep manure for making liquid with a change of sulphate of ammonia or nitrate of potash in between, using these last in the proportion of one pound to a 50-gallon barrel of water. As each variety shows colour we discontinue feeding, as experience has taught us to keep well on the safe side, and feeding too long means a soft, flabby, easily injured flower, if nothing worse.

Bud Selection.

It is at this point where many growers even yet make their grand mistake. Why this is so in the face of all that has been written and spoken about the difference between crown and terminal buds, it is difficult to say, but many growers still rub off the crown bud, and with it goes their chance of winning fame. Plants propagated in March produce buds about right in August. Mums so treated will, broadly speaking, produce a bud in June after they have commenced to grow vigorously. This is, of course, removed, and then another will be produced about the end of July. When this also is removed, you will get a large percentage of your plants to produce another crown bud about the third or fourth week in August, which will be a good time to retain them.

This rule will not, of course, work out in handling varieties of the Vivand Morel type, which persist in throwing buds in season, out of season, or any odd time they feel like it, but in a broad, general way it can be depended on. With most varieties it is safe enough to take the first bud that appears after the 21st. of August. There are a few exceptions, however, many of the pink varieties producing better coloured flowers from buds taken in September. The idea used to be that one could not get the foliage well up to the flower if crown buds were taken, but where the plants are grown right, that is, with a short-jointed growth, the neck is not too painfully apparent.

As the flowers develop, less water is needed, and a crack of air should always be left on top of the house at night to keep the atmosphere dry and moving. Some shading of the pink and red varieties may be necessary during the bright days of October; in fact, we always shade our entire house by spraying a lime-wash over the roof.

Packing and Transit.

The packing and transit of the blooms is also an important item, for it is useless to have good flowers if they get bruised during transit to the exhibition hall. After considerable thought on the subject of packing and noting the different styles adopted by the different growers, I have come to the conclusion that as good a way as any, and certainly the least troublesome, is to pack the blooms flat, with a good pillow of paper for the neck of the flower to rest on. If lots of tissue paper be used round the flowers, I am convinced that the rubbing and bruising is less by this method of shipping than by any other.

Diseases and Insect Pests.

While not exceptionally numerous, they are yet numerous enough to keep a man on the anxious seat all the season. The various leaf spot diseases may be kept in check by the timely use of bordeaux or sulphide of potassium, the proportions of the bordeaux being one in 50, and of the potassium sulphide half an ounce to a gallon of water. Black and green fly may be easily kept under by the use of tobacco. The green fly is the worse of the two, as it works down in the extreme growing tip of the plant, and its presence is not suspected until considerable damage has been done. Thrip, red spider, grasshoppers, caterpillars and a general assortment of "bugs" have their day, more virulent some seasons than others, but success in any business only comes

by careful close watching, and Chrysanthemum growing is no exception.

I give you herewith a list of what I consider the cream of the varieties, and, remember, unless you keep up to date with your varieties, you are liable to be turned down in a very close competition.

WHITE.—Nellie Pockett, Mrs. Weeks, Mme. Carnot, and Timothy Eaton.

YELLOW.—Mrs. T. W. Pockett, Mabel Morgan, Colonel D. Appleton, Mrs. Thirkell, Yellow Carnot, Matthew Smith, and Lord Salisbury. These two last named are spotted more or less with crimson, but they are very large flowers, and will make their mark.

PINK.—Mrs. Coombes, Marie Liger, A. J. Balfour, Vivand Morel, Mrs. Barkley and R. E. Richardson.

ANY OTHER COLOUR.—Kate Broomhead, W. R. Church, Mr. Carrington, Millicent Richardson, Chas. Longley and Lady Anglesey. This list could be much extended, but if I were confined to a given number they alone would be my selection. —W. H. T.

Book Notice.

Sweet Violets and Pansies.*

Such precious little garden flowers as these deserve to have the history of their development recorded in book form. The work is written by specialists, and edited by Mr. E. T. Cook.

The Pansies of the flower shows—gorgeous and handsome fellows—are evolved from the native tricoloured Viola or Heart's-ease, which one finds north, as well as far south in Great Britain. It has a good many varieties, and some of these were secured to start with, cross-bred, and carefully cultivated. Soon named varieties arose, and the progress of improvement is still in operation amongst Pansy lovers. *V. altaica* was probably also a parent to the earliest Show and Fancy Pansies.

The English Show Pansy is classified as yellow grounds, white grounds, or selfs; and what the characteristics and properties of a perfect flower are, have been told in this book. Mr. R. Dean, the writer, furnishes some cultural hints, with selected lists of varieties. "The Show Pansy," he says, "is essentially a northern flower, and it is always well, when a collection is secured for the south, to have the flowers from a northern locality."

Then there are the Fancy Pansies, the term "Fancy" having been applied many years ago to flowers which could not be brought into line with the yellow grounds, the white grounds, and the self-coloured Show varieties.

We find a protest against the showing of Pansies in paper collars, and overdressing. To quote: "They are dressed so elaborately that the dressing only stops short of applying actual paint and perfumery," which is true in some cases. And the term "bedding Viola," is railed against. These should be called "Tufted Pansies," being "hybrids of Pansies and alpine Violas [*V. cornuta*]." There are Violas that are tufted and Violas that are not—the German, French, and other Pansies do not spread at the root as other Pansies do. . . . The term 'Pansies' is a good one in all ways; for without an English name we shall always have confusion with the Latin name for the name of wild species. . . . Cross-bred garden plants should have popular English names." At the same time we cannot overlook the fact of the origin of the whole race—they are essentially Violas.

The rayed and rayless Pansies, also the miniature flowered section, which includes the exquisite *Violetta*, Robin, and others, are well treated here. The alpine and lowland species of Viola are tabulated alphabetically, and their various characters discussed; while the "Violets" of the gardener (which are varieties of *V. odorata*), receive ample attention. The yellow variety, *V. sulphurea*, does not, however, seem to be mentioned.

Those who are really interested in the genus Viola, and its hybrid and cross-bred offshoots, will find much of value to them in the work to which we have drawn attention.

A Noted Shrewsbury Fungologist.

The Shrewsbury Town Council recently conferred upon Mr. W. Phillips, Shrewsbury, the honorary freedom of the borough, in appreciation and recognition of the eminent services he had rendered to it. The Mayor, after Mr. Phillips had taken the oath of allegiance, spoke of his valuable researches in the history of Shropshire, of his work as an archaeologist, and as a botanist, remarking that he had written the acknowledged best book on Fungi. He was also regarded as an European authority in cryptogamic botany. In shooting, too, he has distinguished himself, being the holder of the bronze medal, won at Wimbledon in 1860, and the Memorial Challenge Cup, presented by Major Cholmondeley, and won outright in 1866.

* "Sweet Violets and Pansies." Price 3s. 6d. net. Country Life Library.

NOTES & NOTICES

Gardening Appointment.

Mr. James Foster, for the last four years head gardener to F. Lassetter, Esq., Heverswood, Brasted, Kent, has been appointed in a like capacity to Mrs. Insole, Ely Court, Llandaff, Glamorganshire.

Croydon Horticultural Society.

The members of this society were well entertained at their rooms, the "Sunflower" Temperance Hotel, George Street, on the 18th inst., with a highly interesting and instructive paper on "Orchard and bush fruit pests, and how to combat with them." The lecturer was Mr. A. Maslen, Bramley Hill House Gardens, and a very full report of his essay has been published in a Croydon newspaper.

Tavistock Flower Show, August 12th.

May I say a word for, and of, this very old religious settlement, as well as of the present day flowers and fruits which it exhibits? The line of nearly all the ancient inscribed stones of Devon passes through Tavistock as a kind of centre. The Ogham (ancient Irish writing) which they bear is proof of ecclesiastical and Irish intercourse. They probably indicate, therefore, a period of active mission work on the part of the Irish Church about the latter part of the fifth and first half of the sixth centuries. One stone contained the letter "b" wanted to complete Dr. Fergusson's South British Ogham alphabet; while another, found across a brook, near Fardel, Cornwood, is now in the British Museum. This latter was the first stone found in England with an Ogham (Irish) inscription.—X.

The Gardeners' Dinner and Reception.

Kindly permit me to use your valuable columns for the purpose of reminding all those of our fraternity of either sex, who may purpose attending the Gardeners' Dinner at the Holborn Restaurant, on September 29th, that the event will soon be here, and it will be well to arm themselves early with dinner tickets, lest, too late, they find the supply is exhausted. So many gardeners and others from all parts of the kingdom will be present that the gathering will certainly have a distinctly unique character. Amongst others eminent in horticulture who purpose being present is that venerated rosarian, Dean Hole, who will cheerfully support the esteemed Chairman, Leopold de Rothschild, Esq., and warmly greet all brother gardeners. It will be a gathering that many may never see repeated. Applications of any nature should come direct to me, at 62, Richmond Road, Kingston-on-Thames.—ALEX. DEAN.

Royal Horticultural Society.

The Royal Horticultural Society will hold a special exhibition of Dahlias on Sept. 1 and 2, in conjunction with the National Dahlia Society, in the Drill Hall, Buckingham Gate, Westminster. At this meeting (unless by special arrangement and permission) only Dahlias can be shown with the exception of flowers, fruits, &c., for certificate. All Dahlias, including those shown for certificate, must be left on exhibition until 6 p.m. on the second day. A lecture on "Judging Cactus Dahlias" will be given on Sept. 1, by Mr. C. G. Wyatt, at three o'clock.—At a general meeting of the Society, held on Tuesday, August 18, twenty-five new Fellows were elected, among them being the Right Hon. Sir Francis H. Jeune, G.C.B., Col. T. H. Skinner, and Dr. A. Henry, making a total of 1,095 elected since the beginning of the present year. Intending exhibitors at the Fruit and Vegetable Show, to be held at Chiswick on September 29, 30, and October 1, can obtain an official entry form, together with schedule of prizes, on application to the Secretary, R.H.S., 117, Victoria Street, London, S.W. Entries for this show close on September 22. There will be a special tent for horticultural sundries. A cold luncheon will be provided on September 29, at which the Council, Judges, and the Committees will be present, and for which all interested in the show can obtain tickets (3s., including wine or beer) on application to the Secretary, 117, Victoria Street, S.W., before the 27th day of September.

Mr. Wm. Tricker, New Jersey.

Mr. William Tricker, in charge of the aquatic garden department of H. A. Dreer and Co., Riverton, New Jersey, U.S.A., and author of the "Water Garden," has been appointed superintendent of the new estate of W. K. Vanderbilt, jun., at Great Neck, L.I. The estate runs to 500 acres, and Mr. Tricker has been entrusted with the laying out and development of the same. Much planting on the estate is in contemplation.

Corrected Awards from Shrewsbury.

"I beg to draw your attention to page 177, last week's issue, under heading of awards. It was a small gold medal I received, not a silver one.—Yours respectfully, AMOS PERRY."

"In your excellent report of Shrewsbury Show, you have one error which I shall feel greatly obliged if you will correct, viz., decorative class 33, for a harp, I was first.—Yours, &c., WM. TRESEDER, Cardiff."

Brambles Plentiful.

Housewives will be delighted to know that in the Blackberry districts there are certain signs that the coming crops will be immense. The berries are almost as thick as the leaves on the bushes. The common Blackberry flourishes in all the three kingdoms, and is abundant everywhere. There is no doubt that tons of these fruits will be marketed in pound punnets and gallon cross-handled baskets, for of recent years they have been retailed side by side with glasshouse Grapes from the Channel Islands. It will not be surprising to find them making as much as 9d. a pound. In the preserves of Lord Cecil at Shipbourne, in Kent, are to be found the largest and most delicious Blackberries in England.

Testimonial to Mr. Thomas Humphreys.

Quite recently we notified the appointment of Mr. Thomas Humphreys to the curatorship of the Birmingham Botanical Gardens. During the past ten and a half years he has been assistant superintendent of the Royal Horticultural Society's Gardens at Chiswick, and secretary of the Floral Committee. Mr. Humphreys is about to assume his new duties at Birmingham at the beginning of October. In view of these facts the members of the several committees with which he has been so long connected thought it a convenient time to recognise his valuable and faithful services with some testimonial. Accordingly, with this object in view a committee has been appointed to receive any subscriptions which those whose duties have led them in contact with Mr. Humphreys may feel disposed to give. The chairman of this committee is Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, and the secretary Mr. Richard Dean, V.M.H., Ranelagh Road, Ealing, W.

The New Garden.

The "Pilot" observes that "The Royal Horticultural Society is to be congratulated on becoming the possessor of what is probably the finest hardy plant garden in England. It was bought many years ago by the late Mr. G. F. Wilson, who saw in it that variety of soils and combination of exposure and shelter which in the end enabled him to grow large numbers of plants, which gardeners had till then thought could only be grown under glass. Whether Mr. Wilson was ever beaten by a plant we do not know, but the instances must certainly have been few. What the visitor commonly heard from the host was: 'They can't grow that in such and such a garden—here, you see, it is a weed'; and the statement was not an exaggeration. Partly from the opportunities which the Wisley garden afforded of trying every strange plant in many different situations and surroundings, partly from the faculty seemingly possessed by great gardeners of making plants grow by merely looking at them, Mr. Wilson did score an extraordinary number of successes. It would have been a disaster to horticulture if this matchless collection had been scattered, and the calamity has happily been averted by the munificence of Sir Thomas Hanbury, himself the owner of one of the most famous gardens in the world. He has bought Oakwood from Mr. Wilson's representatives, and presented it to the Royal Horticultural Society. The Society was greatly in want of a better garden than Chiswick, and to some of its Fellows it seemed a mistake to give the provision of a new hall the preference. Now, however, it will have both, and, thus equipped, will we sincerely hope, start upon a new career of gardening usefulness."



Standard Stocks for Roses.

In reply to "A. C.," I think standard stocks are fully appreciated; indeed, many amateurs on beginning use nothing else. Their advantages may be summed up as follows: They are much best for Teas and for some of the Hybrid Teas, better growth (especially in the "moderate" growers), and better flowers being obtained from them. I hardly ever cut a show Tea from a dwarf plant, but there are exceptions. They are easier to bud, especially for old folks like myself, and in wet, dirty weather, such as we are having at present; and, as in "A. C.'s" case and my own, the amateur can get his own stocks in the winter with exercise and interest.

But they have their disadvantages. If their suckers are plainer to be seen, there are also a great many more of them than on the Briar cuttings, and the higher the stem the greater the tendency to suckers. They are not, as a rule, so long lived as the dwarf plants. The general opinion, with which I agree, is that, on the whole, H.P.'s do better as dwarfs. Nor are they so hardy. Not only is it more difficult to protect standard Teas against frost than to cover up dwarfs, but the stem itself of the standard stock is not perfectly hardy. In very severe winters I have lost standard plants, and have found it clearly shown that the damage—frost bite—was to the stem, not to the Rose. The standard stock cannot stand extremes of heat or of cold, and for this reason it is never used, and is almost unknown in America and Australia.

Tall standards, I think, are a great mistake for many obvious reasons. None of my standard stocks stand more than 2ft out of the ground; and what with the staking and tying, the suckers, their short lives, and the extra cost to purchase them, few rosarians would grow standards, were it not for their great advantage in giving better blooms of the Tea, and some of the Hybrid Tea Roses.

Like "A. C.," I have been personally getting standard stocks for twenty-five years or more, but I am filled with envy and admiration at his getting 300 or 400 stocks in three or four days. I should doubt if I have ever gathered more than fifty in a day, though I have collected 1,700 or 1,800 in a winter; and often a dozen has been the whole of my "bag" for a winter's morning. But I am rather particular about them, and it is long since I had any fresh hedges to search.—W. R. RAILLEM.

"Beautiful Roses."

This is the title of a book recently published by Messrs. Simpkin, Marshall, Hamilton, Kent and Co., Ltd., of London, from the pen of Mr. John Weathers. It has thirty-three full page coloured plates by Mr. John Allen, the size of these being 8in by 5in. The writer of this neat little work (numbering over 150 pages, bound in crimson with gold lettering, and having an excellent index) has gone systematically about his task. He begins by asking "What is a Rose?" and lays down the law with regard hereunto. Culture, propagation, pruning of Roses in garden and greenhouse are explicitly described, and at the cost of six shillings (or thereabouts) the book cannot be considered dear.

Dwarf Varieties.

On page 174 of the Journal I gave a selection of single flowered varieties, all of easy culture; I now append a further selection of varieties which I truly describe as "Garden" Roses, sorts really valuable for the garden or for cutting, more than for exhibition as individual blooms. All the varieties I name are of easy growth, therefore the more valuable to the amateur as well as the professional.

Papa Gontier I unhesitatingly place first, owing to its great merit in freedom of growth and flower, its handsome form of both bud and petal, and its grand appearance in a cut state. From early in June until quite late in the autumn the bright rosy crimson blossoms are to be found. This Rose is equally good, too, for forcing.

Cheshunt Scarlet or Glory of Cheshunt in a mass is perhaps the most vivid Rose in existence; it is of sturdy, compact growth, flowering quite freely, and lasting a long time in flower. For a large or small bed of dwarf growth where a maximum of colour is required, this is the Rose to plant.

Gustave Regis grows freely and flowers continually. The flowers are produced in clusters, the buds are very pointed, canary yellow in colour, with a deeper centre, and before they unfold, a Picotee-like edging enhances their appearance considerably. Even when fully developed the huge shell-like petals are admired.

Kaiscrin Augusta Victoria is undoubtedly the finest white flowered Rose in existence where dwarf growth is required. Every bloom, whether as a bud or fully blown, is perfect in shape and purely white. When a mass of this Rose is required I would advise thick planting, as it is of upright growth.

Gruss an Teplitz is quite one of the best of autumn flowered Roses. The shading of velvet over the bright scarlet crimson enhances its appearance. For a mass of colour this Rose is unequalled in August and September; its only fault when in a bed is that its flowers droop considerably. Its proper place is growing up a pole, in such a position the blooms show to perfection.

Mdme. Abel Chatenay flowers freely and continuously. Every bloom, large or small, is perfect in shape. The colour, carmine rose with salmon shading, is distinctly pleasing.

Lady Battersea has perhaps the longest footstalks of any Rose, thus making it more valuable for cutting; it flowers incessantly. The colour is cherry crimson.

Augustine Guinoisseau, commonly known as white La France, is one of the most free flowering of Roses, white, slightly tinted with flesh colour.

Camoens, bright rose, is exceedingly pretty in the bud, excellent for cutting.

Corallina is a grand autumn flowering variety, deep rosy crimson.

Dr. Grill, coppery yellow, shading to clear rose, very distinct.

Isabella Sprunt cannot be omitted from any list, so beautiful are its light yellow buds, produced as they are at almost all seasons.

L'Idéal is a gem for buttonholes. In colour it is yellow and metallic red, shaded, streaked, and tinted golden yellow.

Ma Capucine is also one of the best buttonhole Roses, bronzy yellow, shaded red.

Mdme. Jules Grolez is free flowering, China rose in colour.

Mdme. Pierre Cochet, orange or apricot, shaded yellowish white. Mdme. Planter, pure white, is quite one of the best for beds, giving an abundance of blossom.

Marquis of Salisbury, rich crimson, is a very beautiful variety, almost always in flower. Salmonea combines a remarkable contrast of colour, bright crimson with light salmon centre.

Souvenir de Catherine Guillot, coppery carmine, centre shaded orange, very free and attractive.

Sunrise is quite unique in its colouring, the outer petals reddish carmine, shading to delicate fawn and pale salmon within. Beryl, deep golden yellow, long, perfectly formed buds.

Homère is almost a perpetual flowering variety, especially if growing at the foot of a south wall, blush with deeper centre. Liberty is at once the most charming Rose of its colour, bright velvety crimson.

Mdme. Guinoisseau, pale canary yellow, long buds. Princess de Sagan is a capital autumn flowering variety, therefore valuable, velvety crimson.

Safrano, apricot. Sunset, rich, tawny, shaded saffron, beautiful in bud.

Marie Pave forms handsome bushes in a short time, and gives its white flushed pink blossoms quite freely during the whole of the summer and autumn.

Anna Marie Montravel is quite a dwarf growing variety, producing its pure white blossoms in huge clusters, capital it is for the edging of beds or borders.

Gloire des Polyantha is another dwarf-growing sort. The colour is pretty, deep rose with a white base to each petal. Viscountess Folkestone, silvery pink, a beautiful free flowering variety, very fine in a mass—E. MOLYNEUX.

(To be continued.)

The "Daffodil King" on Tour.—No. 9.

(Continued from page 145.)

Christchurch, New Zealand, was settled by immigrants under the auspices of the Church of England, composed largely of the well-to-do, so that they had good capital to start with, and the refined elegance remains. It was intended to be an exclusively Episcopal settlement, but it has Christianity in as many forms and as many aspects as may be studied in New York. The place is grand in reserved lands, but wealth has not been of equally rapid growth, and while large areas had been retained for public parks, the development is retarded for want of money. This was so palpably evident to our visitor that Mr. Barr was led to investigate the subject, and in the company of a newspaper man fixed on a slip of land having great advantages for building plots, which would have enhanced the park lands, destroyed the loneliness of a main road, and by widening the footpath on the banks of the gentle flowing Avon, have given the inhabitants a Park Lane worthy of their beautiful

town, where the wealth and beauty of the town could have disported themselves between the morning and evening services such as is to be seen in the London Park Lane. The newspaper man made out a good case of an ensured annual income of £1,800 a year, and the newspaper reporters being always on the track of the veteran traveller, several stirring articles were written, but the pride of admitted poverty appeared too strong. By Mr. Barr's suggestions, a lonely and rough road would have been quite transformed, and a fine, broad promenade along the banks of the gentle flowing Avon would have been secured. The popularity of the cycle is as great in Christchurch as elsewhere, and continual friction existed between them and the park authorities. The cyclist, however, held his own, and was wont to make short cuts through the reserve; and there, again, the want of money prevented the making of proper carriage drives and cycle paths. The agitation having been set agoing later visitors may yet see Christchurch rise to its opportunities.

Unfortunately, throughout New Zealand, a great many upright (Lombardy) Poplars have been planted, and being absolutely out of harmony with the native plants, Mr. Barr stated that he took every opportunity to decry them. The reason assigned, however, was that the plants of New Zealand are all evergreen, and it was a relief to the eyes to see the autumn tints of the Poplars. But Mr. Barr pointed out that there were other Poplars more in harmony with their own trees, and other forms of deciduous trees and shrubs that would give them the autumn tints and be beautiful. It may be mentioned in passing that Christchurch is a famous educational centre.

Turning now to Dunedin, this city was settled by the Scottish Church, for Presbyterians (consisted mainly of emigrants with small means), but there you may find the latest forms of theology, represented from America and London. The population of Dunedin is principally Scottish, and the town is the healthy, wealthy, and the most enterprising of the towns in New Zealand. When the gold seekers first arrived, the inhabitants refused to sell them food, objecting to have the riff-raff of Europe and Australia quartered upon them; but when the nuggets began to circulate the prospectors became welcome guests! Up to the present time the matrix of the gold, so to speak, has not been discovered, but dredging the rivers and the lands over which water once had flowed forms remunerative employment for thousands. The gold-dredging machine is a New Zealand invention, and has been exported to all countries of the world where "the yellow metal" is to be found in rivers.

While at Dunedin, in the month of April or early in May, Mr. Barr found it so cold that he had to have a winter suit made. Our friend remarked that it was somewhat singular that the Scotch should have settled in the colder, and the English in the warmer districts. He draws attention to the settlement of America to find a parallel. The Spaniards settled in the southwestern parts, where the climate is not unlike that of Andalusia (Spain), while the "May Flower" with its freight landed in the eastern regions, which are in all respects English in their scenery, the only difference being in the native races that met them on landing. Had the British landed in the southwestern parts, they would have found it too hot; while the east would have been quite untenable from cold, to the Spaniards.

Dunedin is very hilly. There is a good deal of amateur enterprise in planting on the surrounding hills the reserves, which are fairly extensive. Mr. A. Bathgate, a solicitor, is the moving amateur spirit in this enterprise, and gives up a good deal of time to pushing forward the planting of trees and shrubs. Their public gardening is, however, very backward, and in the company with the Mayor, who was anxious during his term of office to do something to mark his mayoralty, Mr. Barr went over their public gardens, and suggested a few alterations of pressing importance. But the Mayor was anxious to confine his benevolence to a new entrance gate, which, as the itinerant told him, would spoil the place, unless entirely relaid out, and this was by no means needed. What was wanted was a continuation of the shrubbery to the river bed, the improving of the river bank, getting rid of an old tumbledown gardener's house shutting out the glass structure where summer bedding plants were raised, widening and extending a flower border, bringing into prominence a glass-covered rockery, and locking up the gates at sundown.

Auckland, well northward in North Island, possesses some fine park lands, those at Mount Eden being under charge of Mr. Goldie, who formerly sent large consignments of Tree Ferns to B. S. Williams.

Referring to the warm lake region of New Zealand (Rotorua), Mr. Barr considered it quite as interesting as the Yellowstone Park in America. It is true there is not the same grandeur as can be seen in the Yellowstone Park, but the mud and water geysers, the lakes and springs, are all of great interest. Some of these hot-spring regions are in the hands of Maoris, who charge a heavy rate for allowing the freedom of inspection. Near Auckland were the pink and white terraces which remained the wonder of the world, until they were destroyed some years back by a volcanic eruption, which carried off the entire top of the hill, causing the

lakes to dry up and killing a large number of Maoris. Auckland has a remarkably fine collection of South Sea Island relics.

A ride towards Pepperikee is wonderfully rich in foliage. There you may see Tree Ferns with their large spreading fronds, 15ft or 18ft long, growing as solitary specimens along the drive. Wanganoie River extends a long distance above Pepperikee, but can only be explored by canoeing; and the beauty of its trees and their foliage is indescribable. The river, for some considerable distance below Pepperikee is well clothed, and there may be seen the native Palm arising above the scrub. The lower reaches of the river are monotonous on account of the vegetation having been destroyed. Wanganoie is a town of some pretensions, but is a quiet place with a park and pleasure gardens.

On the way to New Plymouth, Mr. Barr spent a few days with a farmer to see the country, which is famed as a butter producing area. New Zealanders declare that they can supply better butter than the Dutch. The land here is admirably adapted for the purpose, and dairy farming is thriving.

New Plymouth is a nice little town, substantial inside, on account of the old Maori pa (fort) which still remains in its original condition, and to see what a Maori fort was like Mr. Barr made his visit to this district. He chanced to be there when the news of the relief of Mafeking was stirring the British race. At one of the centres where a demonstration was occurring, an Irishman, "who evidently had not kissed the Blarney Stone,"—his oration was so faulty—tried to vent the popular feeling in relief, but the populace growing impatient, they hauled him down and made another citizen speak in his place! They finished with three cheers, and the singing of "God Save the Queen."

Providing Underground Rain-water Tanks.

One thing that all skilful horticulturists are agreed on is the great superiority of rain water to well water for application to the roots and overhead of cultivated trees and plants, especially those grown under glass. Therefore, underground tanks should be made in all glass houses for the reception of rain falling on the roof glass, and conveyed thither by inlet pipes connected with the overhead-glass shooting or valley gutter, as the case may be.

In the case of lean-to houses or three-quarter spans, the soft-water tank should be excavated under the pathway at the back. The sides and ends of the individual tanks should be cut evenly down and on the batter, so that the 4½in. brick wall may be built up close against solid earth from bottom to top. A "dip-hole," about 2ft square and 20in deep below the bottom of the tank (which should slope gently in the direction of the said dip-hole), should be provided in making the tanks.

This will allow a full can or bucket of water to be extracted from the tank as long as the bottom is covered with the crystal fluid. A tank 21ft long, 4½ft deep, with an average width of 3½ft (inside measurements), will hold about 2,000gals of rain water. A 4½in tie-wall should be built across the middle of the tank, leaving a space of 4½in from the floor-line in the centre of division wall, to enable the water to rise in both divisions at the same time.

The top course of brickwork should be built in cement, and the whole surface of work should be afterwards faced with compost, consisting one part of cement and three of sharp sand. In excavating for a tank of the dimensions given above when built, 9in more should be added to the length and width, and 4½in to the depth. A few short lengths of oak, 4in by 3in, placed across the tank at intervals of about 3ft, will afford ample support for the trellis pathway to rest on.

Each block of span-roofed houses should have two tanks of the description indicated run right across the several houses constituting the block—one at the bottom and one half-way up the length—a short length of lead pipe, say, 6in long, 2in or 3in in diameter, with a flange on top, being inserted in the gutter-valley immediately over the respective tanks, to convey the rain water falling on the glass roofs therein. It would be money well spent to make a pond or other kind of sunken reservoir, to take the overflow water from these tanks during the autumn, winter, and early spring months, thereby providing a good supply to fall back on in time of need—i.e., when a spell of dry weather has set in.

Still better, if a galvanised iron tank, capable of holding 1,000gals of water, is elevated, on a substantial frame-work, to the level of the ridge of houses at the highest end, and the water pumped up into it by a small gas or oil engine, or windmill, connecting the elevated cistern with the several houses by means of gas tubing, standpipes, and a length of hose, thus securing a boon that cannot be too highly valued in forcing-houses—namely, a supply of sun-warmed rain water laid on in readiness for use through the hose when required.—(From Ward's "Book of the Peach.")



A Wanderer's Notes.

A Dublin correspondent who visited a lovely Sussex manor and two London gardens recently, sends a most interesting letter noticing some of the things he saw. Thus: Water Lilies at G— were splendid, so also Tea Roses, &c., and I never saw Rosa Wichuraiana so good as it is there, draping the flower garden steps, and dangling from the pergola amongst the bronzy leaves of Thunberg's Vine. Clematis viticella in great variety, from snow white to deep claret crimson, was also very dainty and distinct, and seems hardier and more free in growth than is C. Jackmani.

At Gunnersbury House, Acton, the coloured Water Lilies are very fine and beautifully focussed in a delightful and sheltered bit of water. The blue *Nymphaea gigantea* of Australia, in a frame, had flowers nearly 10in across, and is one of the most distinct and noble of all the *Nymphaeas* I ever saw, indoors or out. The Japanese Lotus, or *Nelumbiums*, are just opening their exquisite flowers outside at Gunnersbury in a tank of slightly warmed water; the first time I ever saw them healthy and happy out of doors in Britain.

Hollyhocks at Hampton Court, both single and double, are, and have been, very fine. It has been an ideal Hollyhock year, cool and wet, and they are very stately and handsome everywhere, and of all colours, from snow white to chocolate crimson, and, indeed, very nearly black. The most effective new plant on the mixed border at Hampton Court is *Senecio clivorum*. It is a little coarse in habit close at hand, but 50yds away it is a bold and bright and telling thing.

The cool and moist season that has given us good Hollyhocks and herbaceous plants, such as scarlet *Lobelias* and herbaceous *Phloxes*, has also added a new freshness and luxuriance to our town trees. Everywhere in town the London Plane is very beautiful and umbrageous. So also the lawn grass of London, *Poa annua*, is like rich green velvet under the trees in the squares.

Against the Mole.

Mr. Collinson (on page 167) repeats the old plea that farmers, in killing moles, are destroying one of their best friends. "Facts are facts," he says. They are; and I, for one, believe that farmers are not so stupid as some people seem to think, and that in not a few cases they know more about the good or damage done by the animals and creatures on their farms than "the text books and works of reference" can teach them. The mole is insectivorous, as anyone with a smattering of natural history can tell from his teeth. Our four principal insectivores are the hedgehog, mole, shrew, and bat, which have similar teeth. Like the hedgehog, he would also probably be carnivorous when he got a chance such as a nest of young mice. No doubt he does good in destroying grubs, especially wireworms, and cockchafer and "daddy-longlegs" grubs; but I should say at least three-fourths of his food would be worms, and they, Darwin tells us, do as much, probably very much more, good than the mole's friends lay to his credit.

But he does good to the grass, we are told—that is, he brings up some of the surface soil (at the same time creating a drainage) which, scattered by the bush-harrow, does undoubtedly good by acting as a top-dressing. That is so; and if he would confine himself to working in the meadows during winter, and up to the beginning of April, he would do but little harm; but he does not, and molehills in the mowing grass are injurious to the hay, the scythes, and the machine, and to the pasture in the summer. As a cultivator of land I say to the mole, "No, thank you." I like to do my own draining in such places as I wish; I like to do my own digging in such places and at such times as suit me best. I have had people say to me with regard to bullfinches and sparrows, that they do me good by thinning the too great abundance of my Apple blossom. I do not argue. I say, I like to do my own thinning. Moles often get into my garden and do a lot of harm by their indiscriminate digging. Of course they do; you might almost as well say that a lot of children turned into a garden with their toy spades and told to dig where they liked would do no harm, as to deny that moles do harm to the gardener.

They throw up their heaps on my croquet or tennis lawns; they destroy quantities of seedlings in my vegetable beds; several times I have known a Tea Rose bed, when covered with leaves in winter, honeycombed from end to end and seriously injured. Obviously it is just the same with the farmers' seed-

lings and arable land, where the mole does more harm than in the grass. Farmers really are not so foolish as to pay for the destruction of moles, unless they see and know the harm they do. We do not want them exterminated, but merely kept within bounds—few things can get at them to prey on them, and they increase enormously where not attacked by man. They do not do very much harm in the low meadows where they breed, but must be kept down in the cultivated land.—W. R. RAILLEM.

Plea for the Manetti.

If "W. R. Raillem's" remarks (vide issue August 15) had only been confined to the comparative merits or demerits of the Manetti, with the Briar or other stocks, I should agree with "A. C." on the inadvisability of rushing into print on its behalf. But when that most useful and popular critic, with the usual courage of his opinions, would sweep away the Manetti from the face of every professional Rose garden (very rarely does the amateur find even a corner for it), it is high time to break a lance in its defence, and show cause why it should not hold a prominent place; next to the Briar, of course I am glad to know the Manetti is used in our Rose nurseries, both small and great; ay! in spite of "W. R. R." quoting that eminent authority, Mr. George Paul, "that he could not sell plants on the Manetti."

May I be allowed here to give an extract from the venerable author of "The Rose Garden," Mr. William Paul, who, while he acknowledges his preference for the Dog Rose as a stock, of the Manetti, thus expresses himself: "Larger plants may usually be bought on the latter stock and at a cheaper rate. A good cultivator will grow Roses very well on either stock, provided with the Manetti he exercises due vigilance to keep in check the shoots of the stock which are constantly springing into life. On poor dry soils, where Roses on their own roots and on the Dog Rose are kept in condition with difficulty, the Manetti stock has often been found a boon."

Amateurs often ask, What is the Manetti? Where does it come from? Thomas Rivers, the great authority of his day both as an author and practical gardener, answers these questions in a few words. He says (writing in the beginning of the '60's): "I received it some twenty years since from Cairo for a stock. It was raised from seed by Signor Manetti, of the Botanic Gardens at Monga. All the Roses I have budded on this stock have succeeded admirably." Such is the verdict of history recorded by high authorities of a past generation in favour of Manetti. Now we will turn to the almost universal practice of Rose nurserymen at the present day, as a set-off against the pessimistic views of "W. R. R." of the value of the Manetti as a stock.

In most of the leading Rose nurseries, I believe, at least half of the different varieties of budding stocks are Manettis, and this, too, we maintain, greatly to the advantage of the public. Going round lately the large Kings Acre Rose and Fruit Nurseries, near my residence at Hereford, three breadths of Manetti stocks (nearly 70,000) particularly struck my attention, on noticing which the foreman remarked: "Ah, sir, if it were not for the Manetti I don't know what we should do to supply our customers. Briars are getting more expensive and difficult to buy every year; indeed, I believe we actually lose by the present price we charge for standards!" And this in a county like Hereford, where the Dog Rose or Briar grow in well-nigh every hedge! "A. C." must indeed have been exceptionally favoured in getting his Briars so easily. Even when got, long experience speaks out sadly, that the percentage of those stocks that die, owing to early frost or drought, or previously by exposure of their roots in the interval after raising and delivering, is something enormous. All these drawbacks—and serious ones they are—enhance the value of the Manetti and assign a just cause why it should be so extensively grown.

No one can go more heartily than your correspondent does with "W. R. R." on the too common error of deep planting, whatever the stock may be; but surely, to introduce the subject, as analogous of aerial roots, as in the case of the Vine, from superabundant moisture in the canes, is wide of the mark, as also to speak of budding on the Manetti stock four inches below the ground on non-aerated soil! If the poor, distressed Rose plant, which is appealed to for an answer, were to give one, it could only be this: "Who are you speaking about? I don't understand."

The conclusion of the whole matter from the writer's point of view is that, given suitable varieties of Roses, i.e., all but a very few weak-growing H.P.'s and, of course, H.T.'s and Teas, the Manetti is an admirable, all-round, indispensable stock, and in almost every soil will hold, and more than hold, its own; while a pinch of common sense is needed in the selection of a few varieties, not to be budded on the Manetti, not a single pinch of "plant food" in any shape to grow big back-row blooms for exhibition should be given, and then the public will have no cause to complain of plants they receive grown on that stock. In the Rose garden of your correspondent there are now two great novelties of the season—H.P. Frau Carl Druschki and Ben Cant, on the Manetti between 6ft and 7ft high! What grand cut-backs will they not be next year.—HEREFORDSHIRE INCUMBENT.



Among the Fruit Trees.

All too soon the damp, chilly evenings have come, and the fast shortening days proclaim clearly that autumn will soon begin. The summer cannot now atone for her past misdeeds and lack of brilliant sunshine; but let us hope that with the early days of the autumn a new era of sunshine and settled weather will begin. Given such conditions, September and October are indeed glorious months, especially for the fruit grower, for then the store rooms should be overflowing with a supply of good things for winter use, and the sunshine plays a potent part in preparing the wood to yield another year's supply.

Unfortunately, the crop of Apples and Pears in Britain is this year probably the lightest recorded for a generation, and under such trying circumstances many may be tempted to neglect their trees, to their serious detriment in the future. To the cruel frosts of last spring must be laid the principal reason of the failure of our fruit crops; but the unripened condition of the wood also had something to do with it. The blossom on many trees was not nearly so strong as usual, notwithstanding the fact that they bore only light crops the previous year, and undoubtedly many of them were imperfect, and under favourable conditions would not have set. In some low lying districts I can point to trees which did not bear a single blossom last spring, simply because the wood was unripe; and although we all hope for a finer and brighter autumn this year, it rests with the cultivator to do everything possible to facilitate the ripening of the wood.

When the time cannot be spared to carry out both summer and winter pruning, I have no hesitation in saying that September is the best month in the whole year during which to prune the majority of fruit trees. The great drawback to doing it then in ordinary seasons is that the trees are laden with fruit; but this season there is a clear course in far too many instances. Advantage should therefore be taken of such conditions to prepare the trees for the work of another year.

Trees of all descriptions have made a great amount of growth, and if pruning is done during the next few weeks the wood in every part will get full exposure while the leaves are carrying out the important work of sap elaboration. Then, in conjunction with favourable weather, many buds will be converted from wood buds to fruit buds, which under less favourable conditions will remain in the initial stage.

The method of pruning which is now generally accepted as the correct one for standards of both Apples and Pears consists of thinning out the shoots, so as to allow the light and air to reach every part of the tree, and shortening the points of the branches but little. The term "thinning out" is, however, rather a vague one, and the question arises, At what distance apart should the branches be left? Some might think a tree well thinned if the leading shoots were 1ft apart; and while a tree is young that distance will often suffice; but as it increases in size the extremity of the branches should be further apart, and the centre left comparatively open, to allow the light and air to freely penetrate the lower parts of the tree. The shoots of weak growers, too, need less room than stronger growing kinds. I find a suitable distance for the main branches is from 18in to 2ft apart. From the main branches young shoots should be left here and there at almost, or quite, full length, these young shoots quickly forming fruit buds along their whole length.

In pruning a tree on this system, the first thing to do is to reduce the number of the main branches if they are too numerous, and then to cut away superfluous side shoots. The latter can at this season be cut to within two or three leaves of their base without fear of their starting into growth. If the young shoots retained on the ends or sides of the branches are long and thin, remove a few inches; if fairly strong and self-supporting, do not shorten them in the least. By such means good shapely trees are produced, which do not send out hosts of strong shoots on the one hand, or become weak and drooping on the other through need of a little shortening.

In gardens where pyramids and bushes are usually grown instead of standards, the orthodox method of "spurring" the branches is generally followed, and pinching the shoots in summer is not often neglected. If this pinching has been done, September is an excellent month during which to complete the pruning, instead of deferring it till winter; but in those instances in which summer pruning has not been done, no time

should be lost in pruning the trees thoroughly. This spur system answers very well if root-pruning is practised in conjunction with it whenever the trees show a tendency to grow too strongly; but it entails infinitely more labour than the thinning out system already described for standards, and certainly does not, as a rule, give better results. It is therefore an open question whether a freer extension of growth should not be more generally encouraged with pyramids and bushes in private gardens. —H. D.

Melon Plants Going-off at the Root.

The following is an answer to a query sent by "J. T. C.": The specimen you submitted for examination we found, under microscopic scrutiny, to be affected with root stem eelworm (*Tylenchus obtusus*). A bit of root stem treated with dilute spirit and teased yielded the "finest sight" of the blunt ended (the blunt applies to the head part, for the tail is sharp pointed) eelworm that has been presented to us in the many examples it has been our privilege to examine during many years.

It is solely a root stem affection, and gives rise to the disease known to Cucumber growers for market as "clubbing," because the stem of the plant in the soil is often much enlarged, the parasitic animal exploiting the host plant for its particular benefit, the irritation set up by the eelworm causing the plant to concentrate its energies on the healing of the injured part, and a great growth of cellular tissue is the consequence, albeit at the expense of the top growth, which suffers in consequence of the deprivation of nutriment, and collapses as soon as the eelworms have cut off the supplies by the destruction of the root stem tissues all round.

The eelworm is very common, found in most, if not all, soils where there are semi-dead and decaying root parts of plants, all freshly cut turfy loams we have examined yielding specimens of this species, and also stem-eelworm (*Tylenchus devastatrix*) from the decaying root stems of the natural herbage, particularly those of leguminous plants, especially Clover. The old gardeners might not know this, but they did know that turfy loam gave the best results when it had been stacked long enough to destroy the natural herbage, and had become what was termed mellow.

This mellow loam, often treated in the rot-heap with lime and soot for the destruction of contained animal pests, does not contain eelworms, for they evidently need living organic matter or an abundant supply of nitrogenous substance for breeding purposes, and do not find it in vegetation reduced to mould or inorganic matter, so that there were in olden times few, or no failures with Cucumbers or Melons, most of the crops of which were grown in dung-heated pits or frames, not more distantly than half a century. Raw, crude compost, therefore, is the beginning of eelworm disease, the pests being introduced in the turfy loam.

In this connection we particularly allude to stem-eelworm (*Tylenchus devastatrix*) and to root stem eelworm (*T. obtusus*), for root knot eelworm (*Heterodera radicola*) is not indigenous to this country, having been introduced from the Continent of Europe, and is an indoor rather than outdoor infection, though not uncommon on Tomato roots against walls, and even on Cucumbers and Vegetable Marrows on ridges of fermenting materials, being probably due to the plants being potted with old potting material, they being raised under glass, and bud-strong before planting outdoors.

When new, raw, or freshly cut turfy loam is used it should either be heated on iron plates to a temperature of 180deg to 200deg, or treated with boiling water or steam, in no case exceeding a temperature of 212deg, for that would probably prejudice the nitrifying micro-organisms, and a temperature of 135deg will destroy eelworms and resting spores of fungi; but to make sure, 180deg is as certain as safe. What a bother for so microscopic an object! Well, do the next best thing, and better the soil by adding to each 28lb a mixture of basic cinder phosphate eight parts, and kainit three parts, using 1lb of the mixture, and letting lie in stacks from late summer to wanting for use in early spring; then cut the stack straight down, stopping up and blending top and bottom outside and inside well together. Or, spread the turf out and sprinkle on it a one per cent. solution of formaldehyde (an aqueous solution of formaldehyde containing thirty-five per cent.), or, to be explicit, one fluid ounce formaldehyde to five pints soft water, and give the turf as good a wetting with this as is effected by an ordinary watering with water. The commercial price of formaldehyde is 1s. 6d. per lb. The nematodes collapse at once on being reached with the formalin—it is the same thing as formaldehyde, and Professor Arthur has shown that steeping Potato sets in a solution of half a pint of formalin in fifteen gallons of water for two hours is a complete specific for American Potato scale (*Oospora scabies*); and, if so, why not for other fungous pests that infect useful plants by the roots, such as sleeping disease in Tomatoes, Cucumbers, &c.? It is only one part formalin to 240 parts water, and it also will kill nematode worms, so that probably it might be used safely to the roots of plants in growth. But on this point we have no certain data,

our experiments being laboratory, and the one per cent. solution certainly injures the young rootlets of even ligneous plants, such as Roses, but the plants soon recover and grow away splendidly when freed from the nematoid worms, as the one per cent. solution certainly effects.

Another point is the disinfection of eelworm and fungoid infested houses. Spray them well in all exposed parts with formaldehyde solution, one part in 240 parts water, and soak all walls and groundwork parts with the one per cent. solution. This we advised to a large grower of Cucumbers for market, losing £1,000 last year from leaf spot (*Cercospora melonis*), and his silence is marked this year; for, like the lepers of old, few return to give thanks, even when cured. We thank you, therefore, all the more for your appreciative remarks, and assure you we are always ready to help our subscribers to the best of our ability.

Peach Shoots Diseased.

In answer to "R. F.," the shoots that have been affected since they were about 6in long are suffering from mildew, a term given to the meal-like white patches that appear on young leaves and tender shoots, at first small, but which soon spread and run into each other. They thus form a thin white belt, both surfaces of the leaf and all those of the shoot more or less affected. The "meal" is due to the production of innumerable conidia (early stage or summer spores) of the fungus named *Rodosphaera oxycantha*, the specific name signifying that it commonly infests the Hawthorn. The young shoots of quickset hedges are often quite white-looking by its presence on the tender growths. The pest is, indeed, very common, attacking many wild plants belonging to Rosaceæ, and occurs on the Apple, Apricot, Cherry, Nectarine and Peach, Quince, and other Rosaceous plants under cultivation; it also occurs on species of *Vaccinium* and *Diospyros*.

Chains of conidia are first formed, and later in the season minute black ascigerous fruit appears; each perithegium contains a single ascus, and near its apex bears a cluster of almost erect appendages, with much-branched tips. If the fungus attacks full grown leaves but little injury is done; whereas, when quite young leaves and tender shoots are attacked, as generally is the case, the injury is often severe, the growth being crippled and the young wood practically ruined, especially in the case of Peach trees.

Royal George is very liable to attacks of the fungus, this variety of Peach often being infested, as in your instance, while other kinds growing alongside of it are quite free from the mildew. We do not think it is due, as you suspect, to bad root action, but to inherent susceptibility or tenderness of constitution, though lifting an affected tree somewhat mitigates the liability to attack for a time; but this is because the lifting tends to promote sturdier and more resistant growths.

The only effectual remedy is to cover the wall, though you do not say whether the trees are against that, with tiffany, or netting, and then the trees will not contract mildew, other conditions being favourable for the Peaches. Failing this, we should certainly discard the Royal George, and supplant by a variety or varieties that are not liable to mildew in the particular locality.

The mildew, however, is easily checked. It succumbs readily to sulphur, either in the form of flowers of sulphur or solutions of the sulphide. In applying the flowers of sulphur bellows should be used, and the first application should be made as soon as the young growth pushes, not deferring longer than the first appearance of the faintest white specks on the leaves, shoots, or young fruits, and repeating at intervals of ten days or a fortnight until the pest is annihilated. If you use sulphide of potassium (liver of sulphur), loz should first be dissolved in about a quart of hot water, and when dissolved diluted to 2½gals with water in which 2oz of softsoap have been meanwhile dissolved, using boiling water, but allowing to become cool before adding the sulphide solution.

Well mixed, it is ready for use, and should be applied by means of a spraying apparatus. Treatment should commence early, in order to prevent or check the disease. If this is allowed to run its course, the fallen leaves, and even the affected wood, should be collected or cut off as applied to the first and latter respectively, and be burned: otherwise the ascigerous fruit on the leaves or the young wood will inoculate the trees the following season.

Familiar Fruits and their Origin.

A great many of the kinds of fruit now grown in England were introduced from Asia by the Romans. The Apricot was brought from Armenia, the Cherry from the northern parts of Asia Minor, the Pistachio tree and the Plum from Syria, the Peach and the Walnut from Persia, the Citron from Media, the Filbert from Pontus, the Chestnut from Catana, a town of Magnesia, and the Almond from various parts of Asia. The Pomegranate, according to some authors, came from Africa, according to others from the Island of Cyprus; the Quince from near Cydon, a town of Crete; while the Olive, the Fig, the Pear, and the Apple were all introduced from Greece. We learn from the "Capitulaires"

of Charlemagne, that almost all the fruits above mentioned were grown in the gardens of that monarch, and that even at that early period many varieties had been produced in the course of cultivation. Among them, however, we do not find the Reine Claude, or Green Gage, nor the Bon Chrétien Pear, a variety first presented by St. François de Paul to Louis XI. —("Leeds Mercury").

A Selection of Acacias.

While the bulb and spring flowering shrubs are being ordered from the nurserymen, may it not be that the gorgeous Acacias are left out of mind. We recently had notes from the gardens of Tasmania, and when these came to hand we thought of the splendour of the Silver Wattle, the *Acacia dealbata*, whose fragrant and beautiful yellow showers of blossom are the most striking feature of that prosperous southern island in its spring-time. There the *Mimosa* (another of its names) grows 50ft and 60ft high, rather sparse in its growth, but plenteous in its floraison. And in our English greenhouse it is one of the best shrubs we have. Some of the most desirable for pot culture are the following:

Acacia cordata (1), a very distinct and graceful species, having long, slender, but slightly branching stems, densely clothed with leaves and flowers. The latter are in very small globular heads, creamy white. The leaves or phyllodes are cordate, angular, and with a tapering point.

A. pulchella (2) is one of the most beautiful of the Acacias, as it is extremely floriferous, with showy flowers. The plant is of spreading habit, with small pinnate leaves three-quarter inch long, the pinnæ narrow. The flowers are in globular heads, half-inch in diameter, bright golden yellow, and slightly fragrant. They are borne on slender peduncles, 1in long, solitary on the axils of the leaves, but produced very freely all over the plant.

A. verticillata (3), tall growing, of somewhat cylindrical habit, the dark foliage and stem contrasting with the soft yellow flowers. The leaves or phyllodes are half-inch long, very dark green, narrow, sharp, and arranged six or eight in a whorl. The flowers are in a dense spike 1in or more long, sulphur yellow, usually solitary, sometimes slightly branched at the base, fragrant.

A. Drummondii (4) is certainly one of the best, the flowers being borne in axillary spikes, drooping gracefully. In a good specimen, which is as difficult to get as most of the kinds are to keep from growing too much, this is one of the most handsome of spring flowering greenhouse plants, the chief points to be guarded against in its culture being over-potting and over-watering. It is also rather subject to attacks by red spider, which can be subdued by judicious yet efficient syringings.

A. armata (5) attains to a height of 6ft to 10ft or more, and forms a very handsome pyramid, its long annual growths gracefully arching being studded with solitary globular heads in March or April are very pleasing. If there is only room for one this may be given preference. By gentle forcing it may be had in flower from December. The foregoing five kinds are shown in the illustration.

A. diffusa has the flowers globular and usually twin, produced somewhat freely, the growths being diffusely procumbent. It attains to a height of about 3ft.

A. cultriformis is more a curiosity, the leaves being 8in to 10in long, knife-like, terminating with a hooked point. The flowers are in crowded heads, in terminal or axillary racemes, produced during spring. It attains a height of 6ft or more.

A. olceifolia elegans is very handsome, the heads of bloom disposed in racemes, the plants being of graceful habit, and the flowers are very bright. It is the *Acacia lunata* of the botanists.

A. grandis is considered to be a variety of *A. pulchella*, but rather freer in growth, though both are free enough, soon forming specimens of 10ft to 12ft high when the object is a pyramid, and the leading growths trained up. It flowers from February to May, the flowers being globular, very freely produced.

A. longifolia magnifica is a fine erect growing kind, the leaves being linear lanceolate, the flowers borne profusely in loose spikes from the axils of the leaves, and during the early spring months. It attains to the height of a dozen or more feet, but can be kept to six by judicious pruning, which it seems to flower all the better of, at least the sprays are longer and the flowers finer.

The species named are all for the greenhouse. We have not grown any of the stove species. White scale is the great enemy of Acacias. We know of no better remedy than applying methylated spirits carefully to the stems and other parts affected with a small brush, and the cleansing influence of rain when placed outdoors is exerted most beneficially on the plants towards autumn; indeed, the plants usually come in in splendid flowering condition.—B.



Acacias.

1, *A. cordata*; 2 *A. pulchella*; 3, *A. verticillata*; 4, *A. Drummondii*; 5, *A. armata*

Gardens 'Round Sheffield.

One can scarcely realise the immense growth of the demand for flowers during the last few years, the public taste and love for floral beauty having wonderfully developed, and to a great extent "supply" has created "demand," but in seeking the cause we generally find that some influence has contributed to the cultivation of popular appreciation of the florists' productions, and a visit to

Messrs. Artindale & Sons'

establishment reveals the influence in Sheffield in this direction. In the Nether Green Nursery there is about six acres of herbaceous stuff, but, commencing with the plant houses, one is struck with a fine house of *Lilium Harrissi*. Here are about 2,000 just flowering looking remarkably well; about 5,000 are grown, and 250 had been cut on the day of our visit. Of *Caladiums* there is a valuable collection. Noticeable, too, were some lovely pieces of *Abutilons*. *Kalanchoe flammea*, a nice stock; fine pieces of *Dracæna* (*Cordylina*) *Sanderiana*; also *D. indivisa*, *Godseffiana*, &c. There are some very fine *Aralia elegantissima*, *gracillimum*, and *Veitchi*, *Cocos Weddelliana*, &c. The noble *Croton* house is worthy of special notice, because there are few "trade" places where so good a collection can be seen, perhaps from the fact that the firm grows for exhibition. *Pandanus Veitchi*, *Acalypha macrophylla*, *Sanderiana*, and *musaica*, *Ficus repens variegata*, *Alocasias*, *Marantas*, and *Ixoras* are all well in evidence. Some nice plants of *Nidulariums* (one in flower), *Dieffenbachias*, *Eulalia japonica* (grand plants for grouping), *Marantas Veitchi*, *zebrina*, and *Massangeana*, all looked well. Again we enter a house where *Abutilon Thompsoni* is doing well, also *Bambusas* in variety, *Dracenas* and *Asparagus deflexus*. *A. plumosus*, *A. Sprengeri*, and *tenuissimus* are largely grown; indeed, *Sprengeri* can be seen growing very luxuriantly all through the establishment. Here, too, is a quantity of *Begonia Gloire de Lorraine* and the *Turnford Hall* variety, and an improved variety not yet in commerce of a stronger habit and larger flowers than *Gloire de Lorraine*.

The first batch of 2,000 *Tuberoses* are in flower, and then we come to a *Carnation* house 90ft. long, full of "Mals" from end to end, of all the leading and newest varieties; and later we saw another house 90ft. long, full of border varieties, including a large quantity of *Childe Harold* and *Heather Bell*. There are growing here about 10,000 *Carnations* in pots, and Mr. Egginton, who is in charge, certainly deserves credit for their remarkably good condition. In the Palm house *Kentias*, *Phoenix*, *Latantias*, *Geonomas*, *Cocos*, &c., demand notice, and on a wall grows *Asparagus Sprengeri* in great profusion.

In another house are *Camellias*, *Roses* in pots, some fine *Aspidistras*, and a *Hoya* on the wall, showing a profusion of flowers. An interesting item is a robin's nest built in the soil of a hanging Musk basket. It contained five eggs, and we were informed that one of the houses is usually chosen for nesting.

In the next house was another batch of 1,000 *Tuberoses*, also *Marguerites*, *Hydrangeas* *Thomas Hogg* and *japonica*; new yellow *Calla* (*Richardia Elliottiana*), *Eucalyptus*, &c. In another house was a large stock of early flowering *Chrysanthemums*, including over 1,000 *Horace Martin*, and such other varieties as *Crimson Marie Massee*, *Godfrey's Pet*, *White Quintus*, &c. Then there are *Gloxinias*, *Begonias*, *Amaryllis*, *Odontoglossums*, *Cattleyas*, *Cœlogynes*, *Cypripediums*, *Calanthe Veitchi*, and *Oncidium*s.

Coming to *Roses*, the firm has about 10,000 of all the varieties worth growing, and though kept back by the cold season they looked promising. A batch of *Lord Penzance* varieties of *Sweet Briars* were also noticeable. Of *Spanish Iris*, there are about 50,000 growing here. *Gaillardia grandiflora* is also in quantity, and there are six large nursery beds of *Iceland Poppies*. Passing on one sees that large quantities of *Narcissus* have been grown, and all the choicest hardy plants. Coming to smaller things, we notice a nice strain of *Auriculas*, of which there are some 10,000; and of *Pansies* there are also thousands of very special merit: they were really very fine. Then there are about 20,000 *Polyanthus* of a very good strain. Of *Sweet Peas* all the leading varieties and colours are grown for cutting, and there are hundreds of yards of them. *Lilies* make another big feature, and hundreds of *Lilium auratum* are in pots. *Dahlias* are by no means neglected, about 5,000 being here. Mr. Egginton has been in charge here for six and a half years, and, therefore, knows what to grow, and when and how to grow it. He prides himself on his *Carnations*, and has helped the firm to victory on several occasions. He was previously with Mr. Lion, of Stanmore, Middlesex; at Hampton Court Palace two years; and five and a half years with Messrs. Hewitt, of Birmingham. At Messrs. Artindale's other nursery, at Ecclesall Road, there is much forced material. Mr. Willingale is in charge here, having been with the firm some years.

THE FLOWER TRADE.

Messrs. Artindale's retail shop in High Street is always up to date with cut flowers and fruit of the choicest kinds. It is the *dépôt par excellence* for everything pertaining to flowers in Sheffield. In the Market Hall they have plants and every

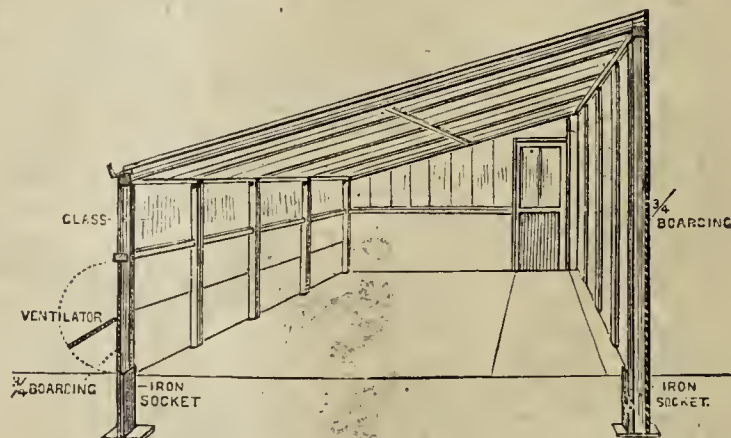
description of design in flowers; from here are despatched daily every conceivable device in flowers, wreaths, anchors, wedding bouquets, presentation bouquets, &c. In the Castleford's Market is the wholesale department, and here we found Mr. John Artindale, the chief of the firm, genial, as always, and shrewd, yet unassuming; he has by polite attention, aptitude, and ability built up a business of which he may be justly proud. Gold and silver medals, and other premier honours, have been secured at the principal shows for floral devices and groups. We gathered from Mr. Artindale that in addition to their own productions they received large consignments daily from all parts. From Seilly comes early *Narcissus*; from Lincolnshire, *Daffodils*; from Guernsey, *Grapes* and *Tomatoes*; from November to April, large quantities of *Chrysanthemums*, &c., come from Norwich, Bedford, and the Channel Islands. Through the summertime there is a large supply of local produce; from Worthing come *Grapes*, and also *Grapes* and *Tomatoes* from all parts of England and Scotland, while they have a daily supply from the south of France of flowers in variety.

Asked as to the volume of trade done, we learnt that the trade had greatly increased, but the prices compared very unfavourably with three or four years ago to the growers. In one month Messrs. Artindale paid the Midland Company £60 for carriage. This will give some idea of the volume of trade done by the firm. Mr. Artindale has lately returned from the Continent, and we asked his views as to the trade. He is of opinion that land in Lincolnshire is superior for *Daffodils*, *Narcissus*, and *Tulips*, and that if the growers went seriously into the matter, they would have the advantage of the Dutch growers in that land was cheaper. Land in Holland is highly rented, but they beat us for labour, men working more hours at a lower rate of wages. In Belgium, labour costs very much less than at home, but the English gardener is not one whit behind them in his ability for growing stuff, the chief advantage in competition, therefore, being labour.—W. L.

Orchard Houses.

The Lean-to.

I will suppose (says the late Mr. Rivers in his book, "The Orchard House"), an orchard house 30ft long is required. A ground-plan 30ft long and 12ft 6in wide should be marked out. Then six posts of oak or good yellow deal, 5in by 3in, and from 10ft to 11ft 6in in length; or of larch-poles 16in in girth, cut in two and the flat sides placed outwards, must be firmly fixed 2ft in the ground: the ground ends, before fixing, should be charred 2ft 6in from the bottom, and then have a coat of boiling coal-tar, which adds much to their durability. They will form the back line of posts, standing 9ft 6in in height from the surface of the



SECTION OF THE LEAN-TO ORCHARD HOUSE.

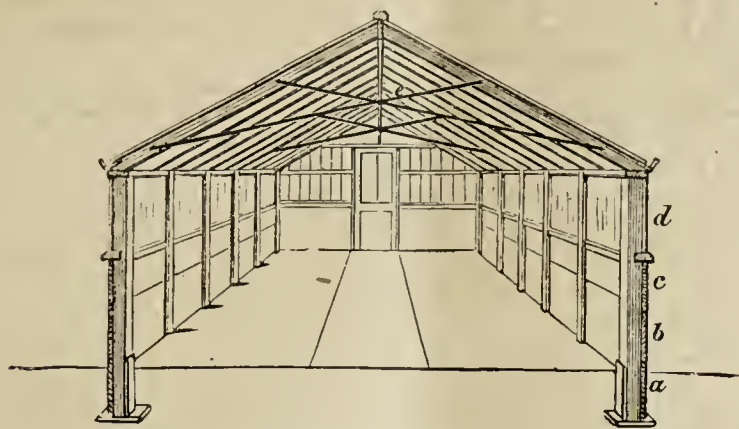
ground. For the front wall six posts of the same thickness, 6ft 6in long, must be firmly fixed 18 inches in the ground, so that they stand 5ft out. Two posts will be required at each end (at one end, if only one door is wanted); these will form the door-posts. On these posts, both at front and back, must be nailed a plate 4in by 3in, on which the rafters are to rest; the posts are thus arranged in two lines.

The rafters must be 14ft long. A 9-inch deal—i.e., a deal 9in wide and 3in thick, will make four, each 4½in by 1½, or nearly so. These are light, strong, and economical. The rebate should be half an inch wide for the glass to rest on (not too much for glass 20in in width). I find that scarcely any breakage takes place from frost owing to the large pieces being elastic; 16-oz glass answers, the extra cost of 21-oz glass is, however, worth incurring.

On and outside the back posts three-quarter-inch, well-seasoned deal boards should be nailed. In the back wall thus formed sliding shutters in grooves 3ft by 1ft must be fixed to act as ventilators—two close to the roof and two 18in from the surface of the ground (the lower shutters in the back wall must

always be on a level with the ventilating shutter in front); if two more be added to the right and left of the lower shutters, all the better: in summer it is impossible to give too much air.

The front and ends (except the doorway) must also have three-quarter-inch boards nailed on outside the posts; one of them, the



1.—SMALL SPAN-ROOFED ORCHARD HOUSE.

a, Iron socket; b, boards to the ground; c, ventilating shutters; d, glass 13 inches wide.

upper one in front, to be on hinges, so as to let down the whole length of the house; this, with the back shutters, when all are open in hot weather, will ventilate thoroughly.

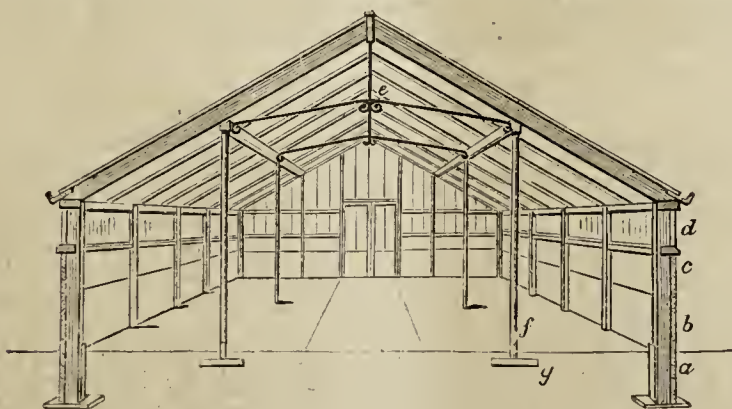
Where there is a brick or other wall to serve as a back wall it may be built against it with a great saving in expense; but as sliding shutters cannot conveniently be let into such walls ventilators may be made at the top of the slope of the roof by having every alternate square fixed in a wooden frame, which should be run in a groove and be drawn up and let down with a cord, to which an iron weight should be attached to keep the sliding sash in place; with this the ventilators can be regulated at pleasure. An equally or more convenient mode of ventilating at the top of the sloping roof is by a continuous shutter of wood in 10-ft lengths, on hinges opening upwards, raised by a line and pulley; this should be 1ft wide at least. In a house not more than 10ft wide this mode of ventilating at front and at the top of the roof will do very well; but in lean-to houses of greater width it is necessary to have shutters in the back wall on a level with those in front, so that two currents of air may meet and "stir up" all the air in the house.

Span-roofed Orchard House.

I now give a description of my favourite sort of orchard house, the span-roofed. In houses of this kind Peaches and Nectarines do not, perhaps, ripen so early as in lean-to houses, but quite as early as on walls. Owing to their being detached they can be more thoroughly ventilated, and the fruit from them is generally piquant in flavour.

In the north of England and all cold or moist districts, of which England contains too many, in the Highlands, and in the cold, stormy climates of the north of either Scotland or Ireland, it will perhaps be quite necessary to introduce hot-water pipes into houses in which Peaches, Nectarines, and Apricots are to be cultivated, not to force them, but to insure their ripening properly.

Height of my small span-roofed house at sides, 6ft; height to ridge, 10ft; width, 14ft. The roof rests on oak posts 5in by 3in, 5ft apart; but I now find deal posts let into iron sockets are



LARGE SPAN-ROOFED ORCHARD HOUSE.

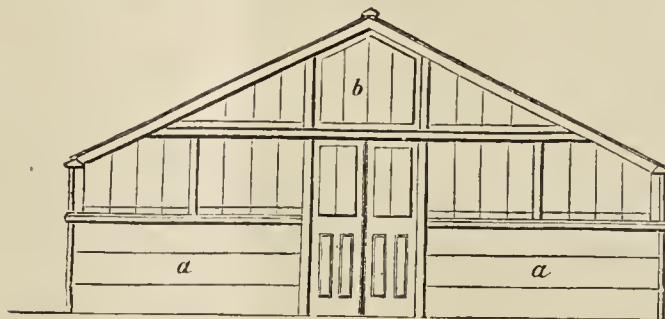
preferable to any other mode of building orchard houses of wood, the usual way of building with brick foundations and sills may be adopted.

The rafters are 20in apart; the roof is glazed with 21-oz glass, in pieces 20in by 15in. The two ends are glazed down to the lower edges of the glass at the sides. The rafters are 3in by 1½in, and are tied together at the apex of the roof by a light, flat iron tie screwed to every fourth rafter.

The path is down the centre, and the rows of trees may be

placed on each border 3ft from stem to stem, so that the sun may shine on every leaf. This is most essential; for I have occasionally had some of my Peaches deficient in flavour, and on examination have always found the trees too much crowded, so as to shade each other. In these small span-roofed houses the trees placed as above form a charming avenue, and are looked down upon by the cultivator, so that every leaf and fruit is seen.

The small span-roofed house referred to will be found an agreeable and economic structure; but large gardens require large houses, and for these the following construction may be confidently recommended:—A cheap, large, span-roofed house 20ft wide and 12ft to 13ft in height to the ridge may be built after the following manner:—Oak posts or deal posts in cast-iron sockets 6in by 4, and 9ft long, should be placed flatwise, so as to stand 5 to 5½ft clear out of the ground and the soil well rammed round them, or concrete poured in so that they stand firmly. These posts should stand in two rows 20ft apart, 6ft apart in the rows. On them should be nailed the plates, to receive the end of the rafters, which may be nailed on to them. These plates should be 4in by 3. The rafters should be 4½in by 1½, and nailed to the ridge-board at the apex of the roof, which should be 12ft from the surface. The ridge-board should be 7in. by 1½. The rafters must be placed 20in asunder. The sides and ends of the house should be formed of three-quarter-inch boards; for ventilation a shutter 18in wide made into 15-ft lengths and opening on hinges downwards, the lower edge 18in from the ground, should be placed on each side: these are for the admission of cool air. For the egress of the heated air an aperture 1ft deep should be made at each end just under the apex of the roof. To this a shutter on hinges should be fixed, and this should be kept open from the beginning of June till the end of September. The roof should be supported, and kept from going out either by light "collar-beams" of wood to every sixth rafter, by iron rods so disposed as to tie the roof securely, or, best of all, by two rows



2.—END ELEVATION OF AN ORCHARD HOUSE 24 FEET WIDE.

a, Glazed shutters on hinges, opening downwards; b, sash for egress of heated air, opening downwards.

of iron pillars formed of 2in gas pipes, which are very cheap, 6ft from each side; the lower ends placed in the ground, and let into a small square of brickwork and cement, the upper ends let into the purlin. These pillars should be about 10ft apart.

It will be seen from this description that a house built after this method is a plain but useful structure, for its sides, ends, and doors (there should be one at each end in the centre) are all of boards, and its roof only of glass. Nevertheless, this description of orchard house will give fruit in as great abundance and of as fine a flavour as a house built ornamentally and at a great expense.

In June, 1860, a house was built here, which for strength, cheapness and lightness of construction is both eligible and agreeable (see figs. 1 and 2). It differs from the houses formerly built and recommended in having no raised brick borders, by which a considerable saving is effected. No inconvenience will arise from the trees standing on the ground level, for it is only necessary to cultivate the trees as pyramids or half-standards for the central border, and as dwarfs with stems a foot taller than usual for the side borders. It is 100ft long, 24ft wide, 12ft high in the centre, and 5ft 3in at the sides. Sides and ends are glass, and on each side and at both ends is a glazed shutter 18in wide, the lower edge 18in from the ground on edges opening downwards for low lateral ventilation, and below that glass to the ground. At each end, just under the gable of the roof, are openings 3ft in depth, to which sashes are fixed; these are to be open all the summer to let off the hot air, and this is all the top ventilation necessary.

The roof, which is formed with light rafters 3½in by 1½, is supported on each side by seven light pillars 1½in in diameter fixed to a bar of iron, which is let into the rafters. Each row of pillars (f) is 6ft from the sides of the house, so that there is a border on each side 6ft wide and an area in the centre 12ft wide.

In addition to the ventilation above described, Mr. Rivers adopted with great success a simple plan he devised of admitting air through underground drain pipes, one end of these air ducts passing under the sill to the outside, the other rising through the floor about the centre of the house, or where required, and covered with a movable lid for regulating the ingress of the air. Mr. Rivers attached great importance to this method, as in cold

weather and when forcing the side ventilators cannot be safely opened. Nothing could surpass the healthiness of the trees in a large house (from which Peaches were being sent to market early in May) in which this underground system of ventilation was mainly relied on for keeping the air sweet to the ground. The trees referred to were in pots. Pyramid and standard trees occupy the central border in the larger houses.

Societies.

R.H.S. Scientific Committee, August 18th.

Present: Dr. M. C. Cooke (in the chair); Messrs. Holmes, Odell, Gordon, Michael, Saunders, Bowles, Douglas, Worsley, and Dr. Masters.

Orites excelsa.—Mr. Holmes showed a specimen of the bark of this Australian Protead, remarkable for containing aluminium succinate. The nearly allied *Grevillea* contains no aluminium.

Rubus rosæfolius.—Mr. Odell showed flowers and fruit of this *Rubus*, which has pinnate foliage of a light green colour, white flowers, and scarlet fruit.

Proliferous Cucumber.—Dr. Masters showed a remarkable specimen, in which from the axil of the remains of the sepals on the top of one fruit a second one had sprung, longer than the parent. This was from a specimen probably akin to those showing remarkable outgrowths of flowers from the axial part of the fruit, exhibited on a former occasion.

Hymenocallis Harrisiana.—Mr. Bliss sent bulbiform seeds of this plant in process of germination, which were referred to Dr. Rendle for examination and report.

Viola discase.—Specimens sent by Mr. Bacon were referred to Dr. Cooke for examination and report.

Apple tree scorched.—A further letter was read from Mr. Dowson relating to Apple branches shown at the last meeting. The dead bark does not peel off on the south side only, as it would do from sun-scorch, to which the mischief has been attributed, but on the north side also. Lightning was suggested as the probable source of injury, as no fungus could be detected.

Vine leaves discoloured.—Leaves were sent from Worthing affected with red spider. There were traces of honeydew and of smut fungus (*Capnodium*).

Cucumber scale.—Dr. Cooke showed further specimens of Cucumber affected with *Cladosporium* scabies, which will shortly be illustrated in the "Gardeners' Chronicle." A close atmosphere is favourable to the spread of these fungi, whilst a current of air is prejudicial to them. This has been observed by growers in the case of Tomatoes affected with *Cladosporium*.

Peas.—Mr. Worsley showed specimens of late Peas rotting near the base, whilst the foliage above turns brown and shrivels. This condition is very common this autumn, and is probably due to excessive moisture at the root.

Saltley, near Birmingham.

This society has survived twenty-six annual floral fêtes, and on the 17th inst. made a success of the twenty-seventh of the series. The energetic secretary (Mr. R. T. Willmott) remarked that so far as his own recollection was concerned, the show had never been finer.

SPECIMEN PLANTS.—In the first prize collection, staged by Mr. Oliver Brasier, gardener to E. Martineau, Esq., Edgbaston, all were excellent. Mr. C. E. Gwyther, for second, had fine examples. Messrs. Perkins and Sons, Coventry, as might be expected, were to the fore with a very good set of twenty-four Roses.

Cactus Dahlias vied with the Roses, and Messrs. Perkins were to the fore with Ibis, J. Weir Fife, Lottie Deans, Cornucopia, H. F. Robertson, Florodora, and Ruby; the second and third prizes fell respectively to Messrs. H. J. Horne and R. Summers. For Phloxes, Messrs. H. J. Horne, J. M. Clewer, and E. J. Byrne were the respective winners. For twelve herbaceous cut flowers, Mr. H. J. Horne led with a very good assortment. Messrs. R. S. Austin and Co., second. Stocks were exceedingly well staged by Messrs. H. J. Horne, G. J. Byrne, and Townson Bros.; Gladioli by Mr. R. Summers and Messrs. Austin and Co.; Carnations were well staged by Mr. White, Mr. J. W. Smart, and Mr. G. J. Byrne.

Vegetables were numerous and well exhibited throughout the whole classes, the competition being keen both in the collections and single dish classes. Messrs. Webb and Sons, Wordsley, Messrs. Sutton and Sons, Reading, Messrs. Yates and Co., Birmingham, Messrs. Austin and Co., Gravelly Hill, and Messrs. J. G. Jester and Son offered prizes for collections.—G.

Shirley, Millbrook, and Freemantle.

This horticultural society held its thirty-eighth annual show at Whithedwood Park on August 19. The show generally was a distinct advance on last year, but more particularly in the plant tent. Specimen plants were better than for some years, the best six being shown by Mr. E. Wills. Miss Todd (gardener, W. Peel came second. For four plants (confined to the district) General Nisbett took first.

Groups were much better than last year. In the open class Miss Todd secured first with a very tastefully arranged lot of suitable plants, Mr. Wills being a close second, and B. Ladhams, Ltd., third. There were a good number of entries, but they were mostly in the groups confined to the district. General Nisbett, who took first, was a long way the best.

Pelargoniums were largely shown, but we have seen better at these shows. The best lot of doubles came from Mr. R. C. Bassett; and the first for singles went to Mr. H. Jupe. Fuchsias were also poorly shown, those exhibited by Col. Sinkins (gardener, Mr. E. Wilcox) being a long way in front of any of the others. Ferns were a very good class considering the cash amount of the prizes, the first for six going to A. Maple, and for four to Mr. Nelson Ward. Coleus and Begonias were also largely shown. For the first-named Mr. Nelson Ward took first, and for the latter Mr. J. W. Fleming was first.

Cut flowers were the feature of the show; we do not remember seeing a better collection at any previous show of this society. As might be expected in the neighbourhood of the Shirley Nurseries, herbaceous flowers were much in evidence. Sweet Peas were also shown largely and well, and the same applies to Dahlias, the Cactus varieties being especially bright and attractive. The first prize in each of the above was secured as follows: hardy garden flowers, B. Ladhams, Ltd.; Sweet Peas, Mr. A. Searle, beating Mr. Breadmore; Fancy or Show Dahlias, Mr. Cozens; Cactus do., in bunches, E. Edwards.

Asters were very good, both the Comet and Victoria kinds, the first prizes being taken by C. W. Breadmore and A. Maple respectively. For bouquets, both ball and bridal, Miss Wills was an easy first.

Fruit was sparingly shown, but the Grapes, Peaches, and collection of fruit shown by Mr. J. W. Fleming, of Chilworth Manor (gardener, W. Mitchell), were good enough for any show, and secured easy firsts in every class. Mr. H. E. Sugden, of the same neighbourhood (gardener, E. Valentine), was second in each class.

Vegetables are always largely shown at Shirley. We have seen the open class for collection of six dishes better filled, but Mr. Mitchell's first prize lot would have taken a lot of beating anywhere. For each of the single dishes there were, we should think, a record entry. Cottagers also came out very strong, their exhibits of plants, cut flowers, and vegetables being not only numerous, but most creditable in quality. The show was materially assisted by a number of trade exhibits, the principal being that of W. H. Rogers and Son, Ltd., with Roses, Dahlias, &c. C. W. Breadmore, Winchester, had a fine collection of Sweet Peas, and B. Ladhams, Ltd., occupied some 200 square feet at the end of the tent. Their exhibit comprised hardy hybrids, Lobelias, a series of varieties obtained by crossing and selection from *L. syphilitica*; Percy Ladhams is rosy carmine with green leaves, and Magnificent is crimson. These are the best of eighteen varieties. Coreopsis Eldorado (grand flowers, 4in across), Chrysanthemum maximum Monarch, faultless flowers of immense size and great purity; Pink Mrs. Mouland, of the perpetual race; Heliopsis B. Ladhams, a great advance on Major; Gaillardias (a very fine bank of Oculata varieties) were amongst the subjects included. At the time of leaving the show (four o'clock) a large number of visitors were coming in.—F.

Trowbridge, August 19th.

For fifty-four consecutive years Trowbridge has supported its annual flower show, and the popularity of the fixture may be fairly gauged by the extent of patronage afforded, and the large number of entries in the several sections of the show. It is computed that over 12,000 persons attended the show during the afternoon, and that 5,000 of that number passed the gates in a space of fifty minutes. The extent and quality of the exhibition as a whole was unanimously pronounced excellent, and provided for many an agreeable surprise, when the adverse nature of the summer has been remembered. Flowers, vegetables, and fruit seemed to show no ill effects of the frowning elements.

Trained stove and greenhouse plants in four classes were well contested by local competitors, Mr. H. Matthews, gardener to W. J. Mann, Esq., Highfield, Trowbridge, winning easily in three out of the four classes which require nine, six, three, and a single specimen respectively. In the first, exceptionally finely grown and freely flowered plants of *Clerodendron Balfourianum*, *Bougainvillea glabra*, *Ixora Pilgrimi*, *Allamanda nobilis*, *Ixora amabilis*, and a huge *Rondeletia speciosa* major were staged. Other conspicuous plants in other classes were *Ixora coccinea*, *Erica Eweriana elegans*, *E. antonia turbinalis*, E.

Austiniana, and Allamanda grandiflora. They were an exceptionally finely grown lot of plants, emanating from one comparatively small garden. Mr. G. Tucker won second prizes for nine and six specimens, and first for a beautifully flowered Stephanotis. Mr. Peters, gardener to J. Kemp, Esq., was third.

Fuchsias, always a fine feature, were very good, though not equal to some shows of the past. Mr. Tucker, Hilperton Marsh, and Mr. H. Pocock staging well in two classes. Groups of miscellaneous plants were fewer in number, though the quality was good. Mr. Helps, gardener to E. H. Atchley, Esq., Rodwell Hall, Trowbridge, won with the larger exhibit, and Mr. Peters the smaller group, both having bright arrangements of flower and foliage. Messrs. Cray and Sons, Frome, were second.

With nine specimen foliage plants Mr. H. Matthews was first; Mr. Strugnell, gardener to Col. Vivian, Rood Ashton, second; and Mr. Helps third. Ferns, twelve in number, were keenly contested, Mr. Tucker, the champion of so many fights, having to be content with third position. A. P. Stancomb, Esq., president of the society, won premier place, his *Dicksonia*, *Microlepia hirta cristata*, and *Davallia Mooreana* being very good. Messrs. Stokes and Son, for second prize, staged really good fresh plants, including *Gleichenia rupestris*, *Chiliensis glauca*, *Asplenium nidus*, *Adiantum Williamsi*, and *Leucostegia immersa*. Lilliums, table plants, trained Zonal Pelargoniums, Gloxinias, and Begonias contributed both variety and colour from many competitors.

Roses made a remarkable display, the flowers so fresh and bright. With twelve triplets Mr. Jno. Mattock, Oxford, won from Messrs. Perkins, of Coventry, and Townsend and Sons, Worcester. He had Bessie Brown, Mrs. J. Laing, Mildred Grant, White M. Cochet, Mrs. Mawley, Chas. Darwin, and Alfred Colomb in very good form. In Messrs. Perkins' stand was the pretty, and, indeed, striking, new Rose, Madame Ravary. Messrs. Perkins took the lead with thirty-six singles with beautiful blooms of A. K. Williams, Killarney, Mrs. W. J. Grant, Horace Vernet, Reynolds Hole, and Duchesse de Morny. Messrs. Townsend and Mattock closely followed. Mr. Mattock again led with twenty-four varieties, Madame Verdier, Star of Waltham, J. B. M. Camm, and Papa Lambert being the most striking flowers, Messrs. Townsend and Perkins taking the remaining prizes. Messrs. Perkins won with twelve varieties with a very nice stand. Garden Roses is a newly introduced class at Trowbridge, and on this occasion made a fine display. The Messrs. Cooling, of Bath, outdistanced their rivals, Messrs. Mattock and Townsend, with a bright and varied collection that was generally admired.

Dahlias were both good and numerous. Messrs. Cray and Sons, Frome, with their usual success, secured four of the leading prizes, Messrs. J. Walker, Thame; G. Humphries, Chippenham; T. Carr, Tiverton; and A. L. Gray, Bath, also successfully competing. Decorated tables, bouquets, vases, &c., command a deal of enthusiastic rivalry, and particularly among lady competitors. Mrs. Hale, Warminster, was given the first prize for her table, which was tastefully treated with bronzy shaded flowers; Messrs. Cole and Son, Bath, second; Mrs. Woodland, Frome, third. For a vase of cut flowers Mr. W. H. Coles, Bristol, defeated Mrs. Hale, and for a combination of fruit and flowers in a vase or epergne Messrs. Cole and Son, Mrs. Woodland, and Mr. Strugnell won in a spirited competition. The Frome Fruit and Flower Co. won with shower bouquets and with buttonholes. Messrs. Cole and Son, Davis and Son, Swindon, and W. H. Coles, Bristol, taking the prizes, also for presentation and Sweet Pea bouquets.

Fruit made a good display, though the competition was not so keen as in years of greater plenty. Two competed with a collection of ten dishes. Mr. Jones, of Bath, was first, and Mr. Strugnell second. The Marquis de Lavellette (gardener, Mr. Oliver), Market Lavington, led with six dishes in a much keener contest. He had a fine dish of St. Antoine de Padoue Strawberries, well coloured Muscat Grapes, and Downton Nectarines as his best dishes. Mr. Strugnell was second, and Mr. Ackland, gardener to A. G. Hayman, Esq., third. Several others competed.

Mr. Taylor, gardener to A. R. Baily, Esq., Frome, won with Muscats and any other white variety, staging nicely finished Foster's Seedling. Mr. Strugnell won with black Grapes and Cherries, the latter very large in size. Mr. Clack, gardener to C. E. Colston, Esq., M.P., won with Nectarines; Mr. Fisher, Bath, Green Gages; Plums, Mr. Cowdray, Steeple Ashton; Peaches, Mr. Helps, with finely coloured Exquisite. Apples, both dessert and culinary, were numerous and good. Mr. E. Fisher had well coloured Beauty of Bath as his dessert, and Mr. J. Ayres, Wells, staged excellent, and, for the season, really massive fruits of culinary varieties for first prize.

Vegetables showed unmistakable evidence of the benefit of frequent rains, and but little trace of spring frost influences. Potatoes were excellent in the open amateur and cottage section of the show; Celery, Peas, Broad and Runner Beans were simply splendid. So, too, were Cucumbers, Cauliflowers, Cabbages, and Turnips, both individually and collectively, and were

finely grown. Names are so numerous, representing the winning section, that space forbids repetition. Mr. Snailum is the courteous and painstaking secretary, and is assisted by a large and influential committee, whose work redounds with the highest credit on all concerned.—A.

Chard, Somerset, August 20th.

The place of exhibition was the Grammar School Playfield, and the day being wet, it soon became sodden and sloppy. The number of exhibits was somewhat over that of last year, and Mr. T. Jennings, the assistant secretary, was very willing to give help. The Mayor of Chard, Mr. S. H. Dening, and the Committee, have done capital service. The judges were Messrs. J. Crooks, gardener at Forde Abbey; W. J. Connolly, gardener, Rhodes Hill, Uplyme; S. Lyon, gardener, Cricket St. Thomas; and Mr. Bailey, Rousdon. Prominent exhibitors were Col. W. A. Sanford, of Nynhead Court (gardener, Mr. S. Kidley), Major Aldworth, of West Coker (gardener, Mr. A. Burton); Major Gifford, of Oaklands, Chard (gardener, Mr. J. Cousins); Mr. J. Wyley, of Ashill (gardener, Mr. Greening); and Mr. A. D. Paul, of Snowdon Hill House, Chard (gardener, Mr. G. Horner), who secured between them many prizes.—X.

Devon and Exeter Summer Show.

Fine weather prevailed. Messrs. Veitch and Son, of the Royal Nurseries, Exeter, had a stand 45ft long, having a background of choice Bamboos, Palms, and Lilies. Some new plants were here for the first time. Among them were a Golden Beech, *Lonicera Hildebrandti*, a new yellow Honeysuckle; *Coriaria terminalis*, with long clusters of golden yellow fruits; *Tamarix aestivalis*, light feathery pink flower; *Polygonum baldschuanicum*; and *Corydalis thalictrifolia*. Among others were *Kalanchoe flammea*, *Beaufortia splendens* (vermilion red, resembling Bottle-brush), *Lobelia Cavanillesi*, and *Gerbera Jamesoni*. Sweet Peas were also staged.

Mr. W. J. Godfrey, of Exmouth, occupied a large place and staged very clean stuff. What Zonals Mr. Godfrey exhibited! comprising several novelties. He had a background of Abutilon Savitzi, Bamboos, Stephanotis, a greenhouse Solanum, and three new Fuchsias.

Messrs. Curtis, Sanford, and Company, of the Devon Rosery and Fruit Farm, Torquay, brought good fruit and hundreds of lovely Roses. The Apples were fine for this year. Among the collection were Lord Suffield, New Hawthornden, Stirling Castle, Yorkshire Beauty, and Duchess of Oldenburg. The table Apples included Gladstone, Lady Sudeley, and Beauty of Bath.

Messrs. Jarman, of Chard, had a wonderful collection of Dahlias. Mr. W. B. Smale, of Torquay, also showed fine Dahlias, some of which he has raised.

OPEN COMPETITION.—SHOW AND FANCY.—1, Jarman and Co.; 2, W. B. Smale. Cactus var., double—1, W. B. Smale; 2, W. Tuplin and Son, Newton Abbot. Messrs. Bird led, and Tuplin and Son, second, with *Gladiolus*; and Messrs. Jarman and Son, and W. A. Gale, with Roses.

Mr. G. Lock's table decorations were greatly admired, and came first; Mr. O. Burton second. For twelve stove and greenhouse plants: First, W. Brock, Esq. (gardener, Mr. W. Rowland); second, Col. Sanford, Nynhead Court (gardener, Mr. S. Kidley). Six ditto: First, W. Brock. Six stove and greenhouse Ferns: First, W. Brock; second, J. H. Ley, Trehill (gardener, Mr. J. S. Harding); third, Mrs. Hearn, St. Thomas. Group of plants for effect: First, W. Brock, with a light and pleasing arrangement. Mr. O. Burton (a coming decorator) was second. For a group in class II., Mr. W. R. Baker, gardener to W. F. Toring, Esq., Knightleys, Exeter, led with a very lovely arrangement.

In Dahlias the first prize was not given, Mr. Gale taking second. Twelve Dahlias, J. Copp, Teignmouth. Six ditto: Capt. Radcliffe, Alphington (gardener, Mr. E. Rowe). Roses: First, Sir D. D. King; second, T. Knapman. Garden Roses: T. Knapman. Asters: O. Burton; second, Capt. Radcliffe; third, J. H. Ley. Sweet Peas: First, J. H. Ley; second, T. Knapman; third, Mrs. L. C. Webber, Incledon. Annuals, also herbaceous perennials: First, Capt. Radcliffe. Carnations: First, Mrs. L. C. Weber, Incledon.

For a collection of eight dishes of fruit, Sir John Shelley led; second, Col. Sanford. Ditto five dishes: Sir J. Ferguson-Davie, Creedy Park, Crediton (gardener, Mr. W. H. Seward); second, Rev. A. W. Hamilton-Gell, Winslade (gardener, Mr. Barnes). Black Hamburgh Grapes: First, J. F. G. Bannatyne, Esq., Haldon House (gardener, Mr. Ellicott). Muscat of Alexandria Grapes: First, Rev. A. W. Hamilton-Gell, Madresfield Court; First, Rev. H. Clerk, Exmouth (Mr. T. H. Delve, gardener). Buckland Sweetwater: Second, Admiral Parker.

VEGETABLES.—Collection of twelve kinds: First, Sir John Shelley; second, Mr. W. R. Mairs had Intermediate Carrot, Renton Monarch Leek, Ailsa Craig Onion, Veitch's Autumn Giant Cauliflower, and Red Globe Turnip in his lot. Collection of six kinds, Sir D. D. King. The vegetables were fine in nearly every class.

The whole show deserved a large attendance. Exeter seemed full of visitors, and the Devonshire Regimental Band did not disappoint them, judging by the crowded condition of space near the band-stand. Friday was a day of real pleasure to thousands of Devonians and others.—X.

Royal Horticultural of Perthshire.

The annual horticultural exhibition of the society (now in its ninety-eighth year) was held near the historic battleground of the Clans Chattan and Kay, fought in 1396, and so graphically portrayed by Sir Walter Scott in his "Fair Maid of Perth." The North Inch, the scene of this battle, is one of Perth's public parks, and here battles of another and peaceful character now take place. One well known competitor was overheard to say he had fought more battles on the North Inch than ever was fought by Gow-Chrom (a noted combatant in the clan battle already referred to). The competitor alluded to is Mr. John Leslie, Pitcullen, who has competed for eighteen consecutive years at Perth shows, always with success, and we were pleased to see him still able to hold his own against all comers.

Beautiful stands of Roses were set up, the quality being exceedingly good. Messrs. W. and R. Ferguson, Dunfermline, gaining the coveted award. Messrs. Croll, Dundee, took second place. A fine bank of herbaceous cut blooms was set up by Mr. Wm. Farquharson, Perth, Achillea The Pearl, Monarda rosea, Helenium pumilum, Scabiosa caucasica, and a number of varieties of Phloxes being noteworthy.

Messrs. Storrie and Storrie, Dundee, had a very interesting table, the background of which was composed of Apple trees in pots, Humeas, Eucalyptus, Ficus, &c.; while groups of Celosias, Cockscorns, tuberous Begonias, and Streptocarpi added brightness. The Streptocarpi were exceptionally fine, having large flowers in many colours. Dishes of Gooseberries in variety, Raspberries, Currants, and Loganberries all contributed to make the group one of great interest.

Mr. Wm. Brown, Hatton Nurseries, Perth, arranged a table of single and double Begonias in endless variety. Dickson and Turnbull, Perth, had a similar arrangement to the foregoing. Mr. John Crichton, florist, Perth, had a beautiful display of floral devices, wreaths, and crosses.

At one end of the large tent Messrs. Alexander and Brown, Perth, put up an imposing exhibit, with a large Kentia for a centre, surrounded with a nice selection of other useful house plants, interspersed with Sweet Peas, Poppies, Cornflowers, Tuberoses, &c.

In the competitive section Mr. Wm. Brown won premier position for a table of plants with a tastefully arranged group on a groundwork of Selaginella. Leslie Brothers were second. For a circular group Mr. Leslie, gardener at Pitcullen, with a very tidy group, secured first place, closely followed by his sons, Leslie Bros., with a heavier arrangement. For a table of plants, open to gardeners, Mr. Margach, gardener to P. W. Campbell, Esq., Muirtonbank, gained the premier award, highly coloured Crotons being prominent in this table. Mr. Leslie was second with a better arranged table, but lacking in brightness.

Messrs. Milne, Huntingtower; Leslie, Pitcullen; and Lowe, of Balhousie Castle, were the only competitors for a table of cut flowers, and gained the prizes in the order named.

For specimen foliage plants Mr. Common, Moncrieffe, led the way; while for flowering plants Mr. Leslie secured first place. Mr. Stenning won for six Ferns, and Begonias, Coleus, Liliums, &c., were largely shown, and all in fairly good condition.

Sweet Peas made a very attractive exhibit, no fewer than eighty-four vases being set up, all of which were of exceptionally high order. Mr. James Kennedy, Moness, Aberfeldy, won with an exceedingly meritorious dozen.

Out of five competitors for stove or greenhouse trusses Mr. Common secured the winning ticket. Roses, Carnations, Dahlias, Asters, &c., were all in strong force in very creditable condition.

For a collection of eight varieties of fruit, Mr. Leslie was first, as he also was for two bunches black and two bunches white Grapes, each nicely finished. Mr. Stenning led for Melons. Beautifully coloured Peaches and Nectarines won for Mr. Common the premier award. Apples, Pears, and Plums were poor, but Gooseberries, Currants, and Raspberries were good. Mr. Harper, Tulliebelton, won for a collection of hardy fruit.

Vegetables were fair. Mr. Harper set up a splendid lot, for which a special award was given. Amongst the single dishes Leeks, Onions, Beetroots, Tomatoes, and Potatoes were specially meritorious.

Excellent weather was experienced during the three days, and it is hoped the Society will have benefited financially, so as to recoup last year's failure to some extent. Much credit is due to Mr. Alfred W. Brown, the energetic secretary, and his committee for the excellent arrangements they made and carried out, and we trust their efforts will be appreciated by the public.—ALBYN.

Brighton and Sussex, August 25th and 26th.

This is the fiftieth year of the Brighton and Sussex Horticultural Society's existence, though it may not have held fifty annual shows. Mr. Richard Dean spoke ancient history, as is his wont, at the luncheon, and carried his listeners back to the early exhibition days of the society, when the Rev. W. Fellows, of Shottesham, and growers from far Norwich, came southward, at much less comfort than we can to-day, to compare the merits of each other's produce, Dahlias particularly, at Brighton by the Sea.

There were nearly eighty gentlemen present at the luncheon, on the invitation of Jeremiah Colman, Esq., who is the president and occupied the chair on this occasion. He spoke most interestingly, as, indeed, did all of the toast-proposers. The Mayor of Brighton gave "Success to the Society," and referred to the elevating attractions of botany and horticulture.

Mr. John Thorpe, the very assiduous secretary, gave figures showing how large was the increase of exhibits and exhibitors this year over last, and stated that the society was in a good way, and was doing much service of an educational and entertaining kind.

In all departments the exhibition merited the highest praise, and never have we seen a finer little provincial show. The fruit was everywhere excellent, while cut flowers, plants, groups, vegetables and decorations, all housed in the Dome and Corn Exchange, were choice, not a weak exhibit (except Roses) being presented to view. So long as Brighton can garner such beautiful produce, and act so liberally to competitors (there were £5 prizes and several silver cups and medals), her summer horticultural show will rank with the best in all England.

Medals were awarded to honorary exhibits; and certificates of merit to new Dahlias. Those exhibiting the latter were Messrs. Stredwick and Son, and Cheal and Sons, both Sussex nurserymen.

Mr. H. Head, The Drive Nursery, Hove, was foremost for the table of plants, with Lilies, Bougainvilleas, Isolomas, Celosias, &c. Second came Mr. Geo. Miles, of Dyke Road, with a thin group.

In class 33 (for a similar group), which was confined to gardeners, the lead went to Mr. H. Goldsmith, gardener to Daniel Hack, Esq., Fir Croft, Withdean, with Isolomas, Begonias, Coleus, Caladiums, Eulalia and Ferns—a sweet little group, and well deserving first place. Mr. Geo. Norman, gardener to P. H. Bayer, Esq., Hatch Beauchamp, Withdean, was second; and Mr. W. E. Anderson, gardener to B. Parish, Esq., Melodia, Preston Park, came third.

For a table of Carnations in class 16, Miss Shiffner, Coombe Place, Lewes, was a deserved first, with an ably arranged display, in which the leading varieties were represented. Mr. H. Elliott, of Courtbushes Nurseries, Hurstpierpoint, was a close second, having Pride of the Market, Raby Castle, Brightonian, and Janie Piper.

Only two lots of table plants were forward, the twelve best coming from Mr. Hugh McFayden, gardener to L. Breitmeyer, Esq., Cuckfield Park, Cuckfield; and second, Mr. E. Lawrance, gardener to T. Oliver, Esq., Tanbridge, Horsham. Each was excellent.

For dinner-table decorations the leading award went to Mrs. S. Lindsay, The Laurels, Hailsham, who used white Poppies, Bougainvillea flowers, and Cosmos bipinnata in glasses over a silver-wrought centre cloth. The second went to Mrs. Coleman, of Ferring, near Worthing, with a very different arrangement, comprising Montbretia and Ferns. Third, Mrs. A. Cooper, of Broadwater, Worthing, with a heavy assortment of Carnations and Lilies; and fourth, out of a competition of twelve entries, came Miss Edith Jerrard, Laine House, Preston Park, Brighton. The furnishing of all the tables left little room for dishes. They were very different to what one sees at the Temple Rose Show.

BOUQUETS furnished an interesting feature. Mr. A. W. Trossell, Lavender Hill Nursery, Tonbridge, Kent, led for the bride's, with Francoa, Lilies, Stephanotis, Gardenias, and White Roses; and second, Mr. F. Webber, The Nurseries, Tonbridge. There were five entrants. For a ballroom bouquet, the order was Mr. Trossell first; Miss A. F. Harwood, St. Peter's Street, Colchester; and Miss Oliver, Tollington Park, London, next in order. The third prize bouquet was solely of rosy Oleanders.

For a floral device, Mr. Trossell was again first with a harp, beautifully put together. Miss L. Peters, North Street, Brighton, and Miss Webber, Tonbridge, came next, both with wreaths.

DAHLIAS made a good show. For six varieties of pompons, Mr. J. Harper, gardener to E. A. Tucker, Esq., Vernon Lodge, Preston, beat Mr. F. Rapley, gardener to Miss Visick, St. John's, Withdean; and third, Mr. E. Anderson, of Melodia. Mr. Harper's set contained Mary Kirk (yellow), Sunshine (crimson), Iobel (crimson-scarlet), Madeline (purple tipped and creamy base), Douglas (deep crimson), and Lilian (a pretty rose).

Mr. Percy W. Tulloch, Sterndale, New Church Road, Hove, was easily leader for six Cactus Dahlias in class 40, with Phineas, Mrs. J. M. Stredwick, Mrs. Ed. Mawley, J. H. Jackson, H. J.

Jones, and Etna. Mr. Tulloch's blooms were perfect, and his staging of them was exemplary. Second out of seven lots came Mr. A. B. Wadds, gardener to Sir W. Pearson, Bart., M.P., Paddockhurst, Crawley, but greatly inferior to the first; and third, Mr. J. Brown, High Street, Worthing.

Messrs. J. Stredwick and Son, of Silverhill Park, St. Leonards-on-Sea, were before Messrs. Cheal and Sons for the twelve Cactus varieties, furnishing a magnificent display. The flowers were spotless, of good size, and splendid, graceful form. We name the dozen—H. J. Jones, Mrs. J. W. Wilkinson, Ivanhoe, Geo. Gordon, Oliver Twist, Comet, Florence Stredwick, Osprey, Columbia, A. Sudley, and Ellen Kraemar. The whole of the Dahlia exhibits were greatly admired.

Single Dahlias were alone shown by Messrs. Cheal, who, however, had a wonderfully fine dozen. For the twelve pompon the same firm had it all their own way with neat flowers. Again Messrs. Cheal led for the twenty-four Show varieties, each flower being as fine and even as could be desired. Mr. J. Brown, of High Street, Worthing, came second.

Messrs. Cheal and Sons, of Crawley, were foremost for twelve spikes of Gladioli, but these were only fair: fresh they were, of course, but rather short in the spike. Mr. G. Norman came second.

BEGONIAS might have been improved, but some good plants were on view. Mr. J. Backshall, gardener to J. Lawson, Esq., Highlands, Hassocks, was in the van for twelve; and Mr. G. Norman followed second; the third being Mr. Anderson, of Melodia.

HARDY FLOWERS could not have been bettered, and for the eighteen kinds (not "varieties," as scheduled), Mr. J. Davis, gardener to Major Thurlow, Buckingham Hill House, Uckfield, beat Mr. W. Manton, The Grange, Hurstpierpoint. The foremost here had grand bunches of *Dracocephalum virginica*, *Galtonia candicans*, *Lilium auratum*, *Saponaria officinalis* fl.-pl., *Phygelia capensis*, &c.

For the twelve varieties Mr. F. Rapley, of St. John's, was a good leader, and Mr. H. Goldsmith, Fir Croft, followed next.

For six bunches of Sweet Peas, the lead was with Mr. H. Harris, gardener to E. M. Eversfield, Esq., Denne Park, Horsham, with Black Knight, Miss Willmott, Lady Grisel Hamilton, Salopian, and Lovely. Mr. F. Webber, The Nurseries, Tonbridge, came second with less fresh bunches. Third out of seven came Mr. A. H. Parsons, 10, Malling Street, Lewes.

For the twelve kinds of annuals, Mr. J. Davis, gardener to Major Thurlow, was easily first with Love-in-a-Mist, *Viscaria cardinalis*, good Zinnias, and *Salvia Horminum*. Second out of six came Mr. F. Rapley.

ROSES were nothing to boast of. For the dozen varieties, Mr. H. Harris, of Denne Park, led, having fair flowers of Maman Cochet, Chas. Lefebvre, Marie Van Houtte, Victor Hugo, and Chas. Darwin. Mr. Harris also led for twelve Teas, with clean blooms of Marie Van Houtte, Comtesse de Nadaillac, White Maman Cochet, and Mrs. E. Mawley. Mr. J. Davis was second.

In class 27 (open) for the twelve Asters, out of seven contestants, the best were from Mr. F. Rapley. For the same number in class 38, for gardeners only, Mr. J. Davis, of Uckfield, was foremost.

FRUIT was excellent all through. For a collection of eight dishes, the first award fell to Mr. J. Gore, Polegate, with fair Muscat and good Gros Maroc Grapes; splendid Williams' Bon Chrétien Pears, Best of All Melon, splendid Figs, and Al Dr. Hogg Peaches, Milton Nectarine, and Lady Sudeley Apple. Mr. Edwin Neal, gardener to Mrs. Nix, Tilgate, Crawley, had excellent Black Hamburgh Grapes, Hero of Lockinge Melon, Royal George Peach, Pineapple Nectarine, and Jefferson Plums, he coming second. Third, Mr. Charles Earl, gardener to O. E. D'Avigdor Goldsmid, Esq., Somerhill, Tonbridge.

Mr. Gore again showed his ability as a fruit grower by winning first for nine bunches of Grapes in three varieties, having Gros Maroc, Muscat of Alexandria, and the little seen white Gradeska. The second prize fell to our old friend Mr. Wm. Taylor, gardener to C. Bayer, Esq., Tewkesbury Lodge, Forest Hill, S.E., with well finished Chasselas Napoleon, Madresfield Court, and Gros Maroc. Third, Mr. J. Seymour, Worthing, whose Alicantes were really grand. There were five competitors.

For three bunches of Muscats, Mr. J. Seymour, with good, but very green samples, led; second came Mr. Chas. Jones, Ote Hall, Wivelsfield; and third, Mr. Edwin Neal.

Nine entries for three bunches of black Grapes were here. Mr. Chas. Earl, Somerhill, Tonbridge, was first; Mr. Neal, second; and Mr. A. Kemp, gardener to C. B. Scrase Dickens, Esq., Coolhurst, Horsham, third, all with Black Hamburghs. The competition must have exercised the keenest powers of the judges, as the five bunches were almost on a par.

Mr. Neal was first for two bunches of any other variety; Mr. Earl second, and Mr. W. Taylor third.

Mr. Jones of Ote Hall had the best dish of culinary Pear (Uvedale's St. Germain). Mr. A. H. Parsons, of Lewes, had the best dessert dish, this being "Williams'." The lead for one Melon went to Mr. W. Nanton, of Hurstpierpoint, and Mr. Rapley second; there being eleven in all. For two Melons, Mr. Neal, with The Peer, a new variety that is winning far and wide,

was first; and Mr. F. W. Thomas, second; there being five entrants.

The two dishes of Peaches brought out six competitors, and Mr. G. Fairs, of the Hurst Wickham Nurseries, Hassocks, had marvellously fine samples, these being Mr. Gladstone and Sea Eagle, each fruit large, luscious, and rosy. Second came Mr. Eastwood, of the Down Hotel, Hassocks; and third, Mr. J. J. Wallis, of East Grinstead.

For one dish of Peaches, Mr. H. Elliott was first; Mr. G. Duncan, Warnham Court, Horsham, second; and Mr. J. Holman, St. John's House, Burgess Hill, third out of seven.

For the two dishes of Nectarines, Mr. Gore was in the van, having well-finished Milton and Stanwick Elruge. Messrs. G. Fairs and E. Neal, second and third respectively, out of six. For one dish, Messrs. H. Elliott, Holman, and Goldsmith, in this order.

Figs, one dish: First, J. Adams; second, H. Goldsmith; third, H. Harris.

Cherries: First, Chas. Earl; second, M. Tourle, Horsted Place, Uckfield; third, H. Harris.

One dish of Plums: First, M. Tourle; second, Wm. Taylor; third, J. Hill, Springfield, Withdean.

For the four dishes of Plums, Mr. J. Dedman, The Wallands, Lewes, led with Victoria, Purple Gage, Washington, and Black Diamond. Mr. C. Earl won second with smaller fruits; and third, out of six entries, Mr. Wadds, of Paddockhurst.

Apples in nearly every case were of a high order of merit. For the four culinary varieties, Mr. Earl beat Mr. F. W. Thomas; and third, Mr. Geo. Walder, The Mansion House, Hurstpierpoint. There were thirteen sets, making an aggregate of fifty-two dishes, and 312 Apples. For the single dish, Mr. Wickham led; second, Mr. Holmes; and third, Mr. H. Garnett.

For four dessert dishes, eleven contested for first place, which eventually fell to Mr. F. W. Thomas, with Lady Sudeley, Beauty of Bath, Worcester Pearmain, and Kerry Pippin. Second, Mr. A. H. Parsons; and third, Mr. Stovell, Withdean Grange, near Brighton. Mr. Garnett had the best single dish, this being Lady Sudeley.

VEGETABLES were staged by themselves in an upper hall, and represented good standard produce. The leading class was No. 62, for nine kinds, the first winning the society's silver medal and 20s. Mr. W. Manton, gardener to the Rev. R. Masheter, was the proud winner, with an excellent collection, comprising Autumn Giant Cauliflowers, Ailsa Craig Onions, Perfection Tomatoes, Solid White Celery, Autocrat Potato, and Snowdrop Potato. Second came Mr. M. Tourle, with splendid Snowball Potatoes, Model Telegraph Pea, Duke of York Tomato, and Scarlet Perfection Carrot, all from Carter's seeds. Mr. A. B. Wadds formed a good third; and Mr. R. Knights, of Framfield, fourth. There were six collections.

For the six kinds, Mr. A. Simmons, The Grange, Framfield, was leader, having grand Alderman Peas and Sensation Potato; second, Mr. Geo. Durrant, Albourne Place, Hassocks.

Potatoes filled the whole length of one table (and part of another), representing sixteen entries, each of six varieties, and six tubers on each plate—576 Potatoes. The premier set was staged by Mr. Wm. Brown, Police Station, Rottingdean, whose produce was even, not coarse, and very clean. The varieties were Up-to-Date, Sensation, Mainstay, Satisfaction, British Queen, and Baxtor. Second came Mr. A. H. Parsons, with Sutton's Ideal, Sutton's Ninetyfold, Daniel's Sensation, Windsor Castle, Up-to-Date, and Snowdrop. Mr. T. Wells, 24, St. Martin's Street, Brighton, was third, and Mr. J. Rogers, fourth.

For Tilley Bros.' prizes, Mr. R. Knights won first (c. 81), and for Davis and Sons' awards, Mr. A. Simmons led (c. 80). In c. 79, for Balchin and Sons' prizes, Mr. W. Manton was the leading winner. The best dish of Tomatoes was from J. Adams, of Hamsey, Lewes, and second, Mr. A. Simmons, there being thirteen entries.

NON-COMPETITIVE EXHIBITS.—Messrs. J. Peed and Son, West Norwood, London, showed single tuberous Begonias, also doubles, and a host of hardy cut flowers. (Silver medal.)

A varied collection of all sorts of garden produce was staged by Cheal and Sons, Crawley. They had Apple trees in pots, shrubs, hardy flowers, Ferns, and indoor plants, as well as Dahlias. (Silver-gilt medal.)

Messrs. T. S. Ware, Ltd., from Feltham, Middlesex, sent an enormous bank of seasonable flowers (silver medal); Balchin and Sons, of Brighton, had a very choice group, finely arranged, of Caladiums, and many other stove plants; also Cattleyas, Phœnocomas, Liliiums and Palms (gold medal).

Messrs. Mills and Son, The Potteries, Burgess Hill, contributed a very interesting display of vases and potteryware of all sorts, for the garden. These were exceedingly well finished.

Messrs. Balchin and Sons were also represented by a choice selection of cut shrub sprays. All sorts of coloured varieties were here, also the Sea Buckthorn (in berry), *Magnolia grandiflora*, *Berberis fascicularis*, *Cornus Späthi aurea*, and the Spanish Broom.

Mr. G. W. Piper, of Uckfield, Sussex, was forward with a charming display of Tea Roses, in which Mrs. E. Mawley was exquisite. His new Peace was also in A1 condition. (Silver medal.)

"Handy Clip" Tubeholders.

Mr. W. J. Godfrey, nurseryman, of Exmouth, Devon, has invented and patented an arrangement for flowers which we figure on this page,



Fig. 3.

This open ring forms a grip, and when the tapering vase to hold the flowers is inserted and pressed down, the grip is made firm. They



Fig. 2.

No. 1.—The wire clip.

No. 2.—The clip simply fixed to a bamboo cane, with a zinc tube inserted.

No. 3.—Illustrates the No. 2 with ten clips and tubes, ready to be dressed.

No. 4 is dressed with Winter Queen Chrysanthemum, as exhibited at the Royal Horticultural Exhibition, London, in February last.

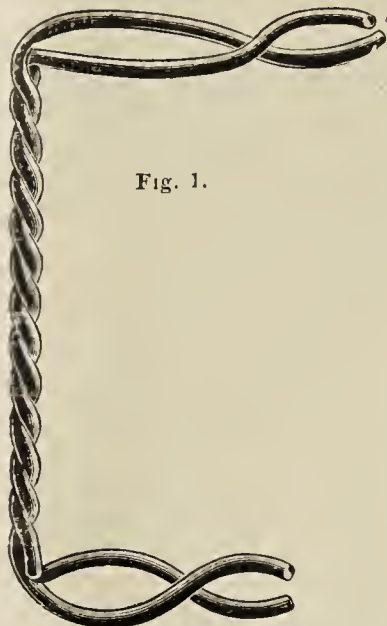


Fig. 1.

and also print the remarks the patentee has sent to us: "There has been found hitherto a difficulty to fix flowers (in vessels of water) in awkward places, such as altar screens, pulpits, pillars, mirrors, curtains, &c. The 'Handy Clip' supplies the thing so long desired, and will prove a boon in decorating churches, halls, and rooms in general. It is a simple arrangement by which a tube to hold flowers can be affixed in positions where it is not possible to drive a nail, or otherwise fasten a support for flowers in water. Altar screens, pulpits, pillars, mirrors, can easily be decorated without the aid of nails. A piece of string, cord, or small rope is tied around and suspended from any projection on which the 'Handy Clips' can be fixed. By their aid curtains, draperies, &c., may be quickly festooned with flowers. A bamboo or any other stick or rod may be stuck among the foliage or other plants, or in a flower pot of soil, and can be readily dressed with flowers. They only require to be used once for their merits to be fully appreciated, and their adaptability to many uses to be readily understood. The principle is a holder made of wire. The ring to hold the water tube is pressed, which causes the smaller ring to open. They are very quickly fixed and removed. The No. 1 size, clip and tube complete, cost 3s. 6d. dozen, post free; and No. 2 size cost 6s. per dozen."

Heywood and Horticulture.

The following letter from Dean Hole was read at a meeting held at the Technical School, Heywood, Lancs., to consider the proposal to form a horticultural society for Heywood and district:

"The Deanery, Rochester, August 13th.

"Dear Sir,—Having found in gardens and with gardeners a chief happiness of my life and many of my dearest friends, knowing the good influence which horticulture has upon all sorts and conditions of men, I rejoice to hear of the new society which you propose to form for Heywood and district, and heartily wish you success. It might be beneficial to ask the Mayor to call a meeting and to appoint officers and a committee. The secretary should be an enthusiastic gardener and a good man of business. Obtain the sympathy (and the subscriptions) of the most influential neighbours, ladies and gentlemen, your M.P., and clergy, but at the same time do all you can to interest the cottage gardeners. If you can induce a working man to take some pains with his vegetables and teach his wife how to cook them, you will do more to keep him sober than all the blue ribbons and pledges worn or signed. — Sincerely yours, S. REYNOLDS HOLE."

Canning Interests in New Jersey, U.S.A.

Canning in New Jersey had its birth about the close of the Civil War. At that time Tomatoes were the principal article. To-day the industry has broadened until almost every kind of fruit and vegetable is put up. The market is no longer confined to that country, but large quantities are exported to England, which is the chief country for consumption of American goods in tins. For many years the packers tried to use glass, but this kind of package for Tomatoes has almost entirely disappeared, the tin being cheaper and in every way preferable.

It has been estimated that there are close to 500,000,000 cans of fruit, vegetables, meats, &c., put up in the United States annually, and, accepting this as approximately correct, it is remarkable how few cases of sickness arise from the use of these goods. It would seem that nature intended New Jersey for a Tomato growing state; the soil is peculiarly adapted for this purpose, and in the high quality of the goods packed she is not excelled. It is estimated that there were 22,000 acres grown in the State last year, sufficient to pack say 900,000 cases, and including the early crop this past year, it is safe to say that 750,000 dollars was received by the farmers of New Jersey for their Tomato crop.

The berry crop of New Jersey has grown to large proportions. For the production of certain varieties of Pears it is not excelled. Sweet Potatoes (*Ipomœa*) have also become an important article for the canner. It is safe to say that at least 1,250,000 dollars



Fig. 4.

is annually paid by the canners to the farmers. In the early days of the industry the notion prevailed that any kind of an old place was good enough for a cannery; an old shed, a barn, or a threshing floor would answer. The embryo packer appropriated his wife's cook stove and wash boiler, or used a large iron kettle, such as farmers use for trying out lard.

There have been seen goods and cases piled out in the weather, subject to the storms and changes of temperature, the owner having no thought of injury, the appearance of his goods being a secondary consideration. In the evolution of the business these things have passed away, and now are to be seen fine large factories, substantial and well kept.



Fruit Forcing.

VINES: EARLY FORCING IN POTS.—The canes for starting early in November to supply Grapes fit for table towards the close of March or early in April must not be allowed to become dust dry at the roots, for that impairs the vitality of the Vines, and may cause the incipient bunches to perish in the buds. Too much water, on the other hand, is inimical to the tender roots, often causing them to decay. Suffice, therefore, that the soil be moderately moist. The Vines should now be at rest, the wood quite brown and firm, the buds round and plump, the laterals cut close to the cane, and this shortened to about 6ft, more or less, according to the situation of the sound buds and the width of trellis. Dress the cuts—the wounds only—with the best French polish or patent knotting whilst they are quite dry as a preventive of bleeding. The Vines should be kept in a cool, airy house.

If the canes have to be bought orders should be given now, so as to secure sturdy canes with plump buds of the desired varieties. The most suitable buds for early forcing are White Frontignan, Foster's Seedling, and Black Hamburgh.

UNSATISFACTORY VINES.—These may be improved by removing the soil down to the roots, picking it out carefully from amongst them, and supplying fresh loam, raising the roots where practicable, and laying them in new soil, especially the fibry ones and those proceeding from the collar. With the roots lifted, laid in fresh compost, and covered 3in. or 4in deep, the Vines generally form abundance of fibrous roots in the new material, and become almost independent of the large roots, which are comparatively inactive through the lower part of the border having become effete. This is best done in advance of the leaves falling, and a gentle watering being given the roots will take to the new soil at once. Vines at rest must not be allowed to become very dry at the roots, for the borders then crack and part from the walls, causing the young roots to perish, and the soil is difficult to make thoroughly moist after it gets into a parched condition.

YOUNG VINES.—Those having made a strong growth, and to be cut down to three plump buds from the bottom of the trellis to furnish a leader and side shoots, one on each side of the rod, another season, may be allowed to grow as long as they like, taking the precaution to keep the principal leaves that correspond to the pruning buds free of spray, so that that part of the cane may get thoroughly ripened. Vines, however, that are expected to do something more than "prove the variety" next year, should have further growth discouraged by the removal of the laterals as they appear, taking care to leave some growth as an outlet for the excess of sap, otherwise the pruning buds may be started.

By this time the wood will be getting brown and hard, and the laterals may be gradually removed, cutting them back in the first instance to one joint, and in the course of ten days to a fortnight they may be cut away close to the cane provided they have not pushed fresh growth, but if they start the buds on the laterals the growths must be pinched at the first leaf, and the removal of the laterals deferred to a later period. In this case the Vines should be assisted with fire heat, maintaining a minimum of 65deg and a maximum of 75deg until the wood is ripe, accompanied with free top and front ventilation.—ST. ALBANS.

Kitchen Garden.

LETTUCE.—Plenty of sweet, crisp, and tender Lettuces should be available for the present use with others of fair size, growing freely for succession during the early part of autumn. From recent sowings there will also be seedlings ready for transplanting, and these well established now will make useful plants for early winter use, while the smallest may pass through the winter and make fine plants to advance to a larger size as spring comes on. Still, the largest seedling plants do not always answer the best, and it is well not to rely on any one sowing, but to make several—one at the present time, and others early next month. The hardiest varieties to be found among the Cos and Cabbage Lettuces are the best for present sowing, choosing Black-seeded Bath Cos, Hardy Hammersmith, and All the Year Round, as amongst the most reliable. Rich ground is not to be preferred for winter Lettuce, but soil of moderate fertility, well drained, open but sheltered position. Sow in drills 9in. or 10in. apart.

ENDIVE.—Young seedlings now attaining a fair size must be thinned so that they do not spoil each other by crowding. Many of the thinnings will be suitable for transplanting, choosing ground

which in winter will provide some protection from cutting winds and severe frosts. Further sowings, too, may be made, Winter Curled being a good variety. Full grown Endive is not ready for use until blanched, which must be effected by inverting a pot over the plants when dry.

CABBAGE.—Seedling Cabbage plants are attaining a size large enough to handle, and prick out a few inches apart to strengthen. The seedlings remaining in the beds will soon fill up the spaces, and attain a size suitable for final planting at an early date.

TURNIPS.—Thin out seedling Turnips as soon as practicable, going over the rows several times. Make another sowing. Dust seedlings lightly with soot to accelerate growth.

LEEKs.—Leeks are gross feeders, but in good ground with ample moisture they can find a fair supply of food, which, however, may be supplemented by applications of liquid manure, where finer roots are desired. Soil drawn to the roots and round the stems largely assists in the process of blanching.

ONIONS.—Onions sown or planted in spring have completed their growth, and may be lifted, or rather pulled up. It will depend on the weather as to the manner of drying. In damp weather place them under a shed with plenty of air circulating. If they can be fully exposed to the sun outdoors this treatment is best, and completes the ripening of the bulbs. Store in a cool, dry place. Sow another row or two of Tripoli Onions.

POTATOES.—As the haulm of Potatoes shrinks, yellows, or dies down the tubers may be lifted, the sooner the better, should wet weather prevail, though the work is not so easily carried out under such conditions. It will be difficult, if not impossible, to dry them sufficiently for storing except under cover, a dry, airy shed being the best place. When picking up the tubers in the first instance discard all the small ones, also those affected with disease. The tubers selected for seed must be perfectly clean, good shape, and of medium size. For eating, the tubers must be thoroughly dried, then storing in a very cool, perfectly dry place. The seed tubers may be placed thinly in boxes, and kept on an airy, light shelf free from frost.

CELERY.—Following upon early rows now in use, more Celery may be finally earthed to maintain a succession. The later rows may be assisted with liquid manure, first removing superfluous leaves from the base, and suckers springing around. Tie the leafstalks loosely but firmly together, and earth some soil round, breaking it down if lumpy into a fine condition. Work a good proportion of soil round the plants with the hand. In the first two or three earthings leave a broad base of soil on each side the rows to receive the next earthings.—EAST KENT.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1903. August.										
		deg.	deg.	deg.	deg.	Ins.	deg.	deg.	deg.	deg.
Sunday ... 9	W.S.W.	64.7	57.3	71.5	54.7	0.17	63.8	61.3	58.4	49.3
Monday ...10	W.S.W.	61.5	56.2	66.4	53.5	0.38	63.7	61.7	58.5	50.9
Tuesday ...11	W.S.W.	58.0	55.0	64.4	44.7	0.60	62.0	61.7	58.7	37.3
Wed'sday 12	W.N.W.	58.7	58.4	70.0	54.6	—	61.6	61.3	58.8	53.2
Thursday 13	W.S.W.	62.3	57.0	77.7	47.3	0.11	62.3	61.3	58.9	39.8
Friday ...14	S.E.	60.2	59.5	70.2	51.8	0.17	63.5	61.8	58.9	45.0
Saturday 15	W.S.W.	61.7	55.5	64.4	57.0	—	62.6	61.8	58.9	50.9
MEANS ...		61.0	57.0	69.2	51.9	Total. 1.43	62.8	61.6	58.7	46.6
		deg.	deg.	deg.	deg.	Ins.	deg.	deg.	deg.	deg.
Sunday ...16	W.	59.6	52.9	65.7	51.3	0.29	61.6	61.3	59.0	45.3
Monday ...17	W.S.W.	60.3	57.1	69.9	54.3	0.07	62.2	61.3	59.0	50.0
Tuesday ...18	W.S.W.	60.3	58.3	69.1	55.0	0.26	63.3	61.5	59.0	54.5
Wed'sday 19	W.S.W.	57.2	54.0	67.0	53.4	0.03	62.2	61.5	59.0	53.0
Thursday 20	W.S.W.	58.7	55.0	63.4	52.2	0.22	62.2	61.4	59.0	47.4
Friday ...21	S.S.W.	57.8	54.7	67.3	52.5	—	61.8	61.1	59.0	52.2
Saturday 22	W.	58.8	54.8	69.2	52.3	—	61.6	61.1	59.0	41.4
MEANS ...		59.0	55.3	67.2	53.0	Total. 0.87	62.1	61.3	59.0	49.1

Dull weather, with cold gusty winds has been the prevailing feature of the week ending the 15th, with an occasional burst of bright sunshine, and rain on five days. Strong winds and showery weather have been the prevailing features during the past week.

THE BEE-KEEPER.

Position of an Apiary.

Many difficulties arise with the young bee-keeper, but few consider how important it is that a good site should be chosen. There are a few good rules to be borne in mind which ought to be considered when a position for the hives is to be selected. We all know how much easier it is to get a load down than up hill; remembering this, then choose a rather low than a high position, for the bees return home very heavily laden during the height of the honey flow, and by considering them in every possible way we shall increase our harvest. Experience teaches us that the winds from the north and east are piercingly cold; then protect the hives from these winds, if possible, either by placing them in a valley protected on the north and east side by hills or rising ground, or by a good thick hedge. Again, the south-west winds bring rain usually, so do not allow the entrances to be exposed to this wind; in fact, apart from the rain it is best to let the entrances face due south, or, better still, south-east, to catch the early morning sun, in order that the bees may be up and doing for we soon learn that the honey season, even in the south of England, is all too short.

THE SOURCE OF NECTAR.—The above must be searched for and get as near it as possible. The beginner thinks that all flowers are visited by the honey bee, but when he has started he becomes very observant, and discovers that all flowers, even his favourites, are not visited. From what, then, do the bees gather the main part of their sweets? This varies in different parts, but generally speaking from white clover, the lime trees, mustard, and heather. In the neighbourhood of market gardens many other flowers yield a rich harvest, but none more so than the mignonette. The bees fly about two to four miles in a direct line from their homes in search of honey, but if we can get nearer the supply much valuable time is saved.

In conclusion, remember to keep the ground in front of the hives free of weeds, &c.; place the hives with their backs to the paths, but facing south or south-east; and keep the hives 6ft apart in the lines and 12ft between the lines.—HYBLA.



* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense.

PEACH SHOOTS DISEASED (R. F.).—See our answer to your query under "Fruit Notes" in the body of the paper.

MELON PLANTS GOING OFF AT THE ROOT (J. T. C.).—Your query is answered under the heading "Fruit Notes" on another page.

BROWN SPOTS ON APRICOTS (J. W. B.).—Yes, the fruits are affected by a fungus, *Sclerotinia fructigena*, this being the final or resting stage, but is more commonly referred to as the brown rot fungus, *Monilia fructigena*, this being the early stage of fruiting, or the conidial condition. It attacks many fruits, the Apple, Cherry, Peach, and Plum, and very often Pear, and also attacks Apricots, being common on various wild fruits belonging to the order Rosaceæ. To the casual observer it is only noticed on the fruit, but the fungus occurs in the young shoots, leaves, and even the flowers. All diseased fruit, therefore, should be collected and burned. Where the trees have been diseased they should be sprayed early in spring with a solution of sulphate of iron, made by placing 2½lb of iron sulphate in a wooden vessel, and pouring on it 2oz of sulphuric acid, and then adding by degrees 5gals of water. This, strained, should be sprayed on whilst the trees are quite dormant, always before the leaf-buds begin to swell. After the buds have expanded spraying with dilute Bordeaux mixture is advised, but this on downy fruits, such as the Apricot and Peach, is often quite as disastrous as the brown rot; therefore we advise "blue water" or ammoniacal carbonate of copper solution, and in using this ascertain a safe strength before applying, repeating at intervals of ten days or a fortnight.

THE STUDY OF AGRICULTURE ("Desideratum").—"A young friend of mine, twenty years of age, tall, and healthy, who has been brought up in the office of his family's business, has taken a distaste to office work, and does not take that interest in the business that would insure success. Many of his relatives are Canadian farmers, and there is a probability that he may be sent out there. Of course, he has just now no knowledge of agriculture whatever. Would you in your next issue suggest a course of study that would give an elementary theoretical knowledge that would be useful to one with such prospects?"

[We think your young friend's best course would be to go through one of the County Council's Agricultural Training Colleges. There is an excellent college at Aspatria, in Cumberland, which is within easy reach. He had better write to the Principal, Agricultural College, Aspatria.]

RUBBER INDUSTRY (W. G. S.).—We think that Peru is likely to be too dry for a successful culture of rubber-yielding plants, also too limited, but we may be wrong. *Hovea brasiliensis*, various *Landolphia*s, and *Kicksia elastica* are the genera mostly cultivated. *Castilonia* is a quick yielding subject, giving returns in six to eight years, we believe, in Malay and the adjoining islands. Para rubber (from Para, in Brazil) is much renowned, and up the valley of the Amazon there are great rubber cultures. For ourselves, we would probably incline to British East Africa and the Shire Highlands as a likely place. We have a gardener acquaintance out there now, who first went out as manager of a tea plantation. He saw money in rubber, and forthwith started on his own. He made £300 the first year, but this was from collected rubber, brought and sold to him by natives, so that he only was an agent, and not a cultivator. We have not heard from him for two years, but his last letter stated that the supply from natural sources would soon be drained. Write to the Consul for Peru, at his Southampton address; he may assist you. An outfit would cost at least £15 to £20; the passage money and cost of living would depend entirely on where you went to. Perhaps the Emigration Office at Whitehall, London, could send you useful particulars.

PARSLEY AND MIGNONETTE UNHEALTHY (E. J. P.).—"I enclose specimens for advice. The plants come up looking healthy, but in the case of the Parsley, the whole row turned yellow and seemed to be quite dead. I watered it with lime water, and now have a fresh growth, but have had the same trouble with another lot in another bed. The other plants enclosed have gone in exactly the same way, but the Mignonette did not all go at the same time, some seeming quite healthy until it was in bloom, and some going soon after it was above the ground. This is from a Vine border. It only seems to affect certain plants, but catches these wherever we plant them in the garden. Can you advise me what to do?"

[The Parsley is affected by the Carrot rust (*Phoma sanguinolenta*), a parasitic fungus, forming sunken canker-like spots on the root of the plants, and, girdling the tap root, causes the plant to have a withered and yellow appearance on the leaves, these going back considerably, and sometimes the plants go off altogether. There are also traces of rust caused by the Carrot fly (*Psila rosæ*), and this is probably the main infection, or rather has been, as this form of "rust" is an early infection, and seldom occurs on Parsley or Carrots sown in the middle of July. The Mignonette is also affected by a disease very similar to that caused by the Carrot fly, a minute maggot eating away the soft part of the root, but it is of an orange colour, and we have not been able to rear the fly. The best treatment you could give the land would be a dressing of gas lime, or of lime, as given in our article on "Cabbages Infested with Grubs," August 6, page 121. Now you may use ammoniacal liquor from gasworks diluted with five times its bulk of water, pouring it alongside of the row or between the rows of Parsley, not over the tops of the plants, giving as much as on an ordinary watering, this acting well on the parasites, and also as manure. The lime water is also good, acting specially well on the "rust," whether caused by fungus or maggot. If not readily procurable you may use Little's soluble phenyle, 1 fluid ounce to 3gals of water, and pour it between or alongside of the rows similar to the diluted gas liquor. This, Little's soluble phenyle solution has special value against root fungi, and also Carrot fly maggot, and may be repeated at intervals of about three weeks, though it will scarcely be required more than once or at most twice this season. It is a capital plan to trench the ground, and also dress the land with a mixture of 8 parts basic cinder phosphate and 3 parts kainit, applying 7lb of the mixture per rod (30½ square yards), pointing in lightly. The mixture is best applied in autumn or during winter up to the middle of February.]

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (J. M.).—Yes, it is *Saintpaulia ionantha*, and its Natural Order is Gesneraceæ; 2, *Cyperus longus*; 3, *Veronica longifolia subscissilis*; 4 is probably a *Convolvulus*, but too scrappy to name from. (F. M.).—*Hypericum Moserianum*. (J. T.).—1, *Dendrobium formosum*; 2, *Oncidium varicosum*; 3, *Cypripedium Morganii*.

Trade Catalogues Received.

Bulbs.

E. P. Dixon and Sons, The Yorkshire Seed Establishment, Hull.
 Fisher, Son, and Sibray, Ltd., Royal Nurseries, Sheffield.
 Little and Ballantyne, Carlisle.
 J. R. Pearson and Sons, Chilwell Nurseries, Lowdham, Notts.
 Toogood and Sons, Southampton.
 Webb and Sons, Wordsley, Stourbridge.



Disappointments.

The harvest moon has again risen, waxed and waned, but it has looked down on little harvest work, and such as there is in course of doing is not of a satisfactory nature. We had no real winter, we had no spring, and even less summer. Taking the country all round, the rainfall has been abnormally heavy and the temperature low.

A wet June gave hopes of a dry July, but alas for the futility of such hopes! July wetter than has been known for forty-five years. The dull, cloudy days make the evening shadows appear to fall early, and the blustering winds sound like the forerunners of autumn. It often happens that the South country harvest is cut and gathered in broken weather, and then our friends of the North reasonably expect, and generally get, better weather for their more backward crops.

We doubt if this is going to be the case this year, unless, indeed, the fine weather is holding back for the Scottish harvest. Not only is corn slow in ripening, but much of it is badly laid and storm-broken, thus making the difficulties of harvesting four-fold. No reaper or binder yet invented can deal with a crop of heavy corn laid, torn, and twisted, as some fields at present are. Here comes in the difficulty to that man who, depending on machinery, has failed to secure adequate hands.

It may be thought by some that the present high winds which prevail will be of advantage to the farmer. True, they help to dry the land, and also—and this is a serious business—do much damage by “necking” such Barleys as are approaching ripeness. A field of “necked” Barley once seen is never forgotten. The forest of straws standing headless, or with the ear hanging, as it were, by a thread, ready on the first touch to fall to the ground. Why Barley should “neck” is not quite apparent. Possibly there is in some of the new and best varieties of Barley a lack of tenacity in the straw, for we usually think of grain as bending to the breeze, not breaking. To gather up these fallen heads is an impossible task, and the loss per acre is considerable. We fancy Oats so far are hardly ripe enough to enable the wind to thresh out the upper grains, and so, for the present, they are safe. Where Barley, through being laid, has partially escaped the necking process the damage also will be great, for laid crops never fill or ripen evenly, and even ripening is the most important factor in making a good sample for the maltster. We all know what indifferent stuff “night-ripe” fruit is, and laid corn may be ranked pretty much in the same category.

We have been reading the “crop returns” for the United Kingdom, and the variations in the estimates in this small area are very great. All writers allow that hay and Beans are well above the average, two crops which require (and have got this year) almost excessive moisture. What has struck us about the Bean crop is its exceeding cleanliness—no black fly or lice, and the haulms corned up to the very top. A good Bean crop is a valuable asset, especially if Maize continues to rise in value.

Oats, too, have profited by the moisture, and the root crops generally, with the exception of Mangolds. Lack of warmth has been a drawback to the Mangold; also the late, untoward spring was the cause of much Mangold land being but badly prepared for seed. There was a difficulty in getting a full tilth, and a fine soil is what the sprouting Mangold loves. Wheat, Barley, and Potatoes come out badly in the reports. There is a constant complaint of lack

of sunshine, without which Wheat cannot show a good, plump berry. There is still time for Potatoes to improve; that is, if disease does not appear, and the South country reports speak of the prevalence of it. So far, we believe the northern counties have escaped, but what may be the result of a continuance of this damp, heavy weather we should not like to say.

It is always supposed that the Eastern counties are peculiarly dry. This year has proved the exception. A rainfall in July of 5 to 7 inches from North Shields to Brentwood in Essex does not seem like the record of a very dry country. Surely the times are topsy turvy. There is one thing in favour of this “droppy” time, and that is “Keep.” Of course, under this head will be included the growing Turnips, the grass proper, and the eddish. There is always a risk for lambs when the pasture is full of growth and the herbage more or less unripe, but a careful flock master will, by the use of dry, hard foods, counteract the effects of too much succulence. It is a great blessing to have plenty, and with the well-won hay crop winter will have less terrors than usual.

Now for disappointment again. Government, look out! We have several indictments against our legislators. How can we compare the cars of Juggernaut with our fiendish motors? They are mild in comparison, for if we remember aright the Juggernaut cars are only driven out at festival times; but these motors are upon us for ever. They talk about no danger with a twenty mile speed on country roads. Are there no teams passing to and fro from the homestead to the field? No heads of slow-moving cattle? No flocks of sheep? No lumbering, heavy carriers' carts? No ladies out in their pony carriages? As to the latter, they will be driven from the roads altogether. It was bad enough to pass a locomotive when the flag man led a restive pony past, but how will it be now? And, in case of accident, who will be able to prove negligent a chauffeur? We know of many a mile of country road bordered on each side by deep, fearsome drains. How about the occupant of a light pony cart under circumstances of that kind? Life has new terrors that our fathers never imagined.

We see only to-day two cases in different counties where drivers in charge of motor-cars were found to be incapably drunk—fine £2 in each case! Is that adequate? A motor under control is bad enough; a motor under the charge of a madman or an incapable is simply an engine of most terribly destructive powers. Is it possible that the fine is limited to £2? We hardly know at what figure it should be put if public safety be in the least consulted.

Again, supposing the motor-car is perfectly harmless, what of the destruction of the horse-breeding industry? What of the smaller demand for good old Oats and sound, well-got hay? We are told we must utilise motor power on our farms. Well, it will have to get a great deal cheaper first, and a race of men must be bred and trained specially for the management thereof. We fancy at the next election (which cannot be far off) intending candidates will hear more than they possibly like on the question. Let us hope they won't unduly irritate the minds of their constituents (especially in the rural districts) by coming round on the canvass with a motor running at full legal speed. At the last election very disparaging remarks were heard here about the man who went round in a puffing, hissing machine, and it is a fact that the man who drove the pair of clinking good horses is our representative at present!

We have not got the Butter Bill through—one of the many innocents slaughtered. Everything seemed pressed to the wall to make room for twenty miles an hour! We had also thought that our interests were of such importance as to merit the sole attention of the special Minister told off to represent us. Our industry is beset with trials and difficulties all along the line, and yet Lord Onslow is taking in hand as well as our affairs those of the Fishery Board. We fail to see anything analogous in the two departments, except that one relating to the harvest of the land—the other to that of the sea. A friend who is farmer and smack-owner draws a larger revenue from the latter than the former. Lord Onslow will be a man of great versatility and power if he can manage both departments with success.

Work on the Home Farm.

At last the reapers are at work but four days later than the date we fixed at midsummer. The crops even now are none too ripe, neither the weather too propitious, but there may be many

dangers following if we delay. So far the crops are fulfilling their promise, the stooks stand thickly together, and as binders make all sheaves alike, that is good evidence of heavy crops. Both Wheat and Barley are heavy in the sheaf, and quite satisfactory as to quality. We were fortunate to miss the heaviest of the June rains, and are now reaping the benefit from that immunity.

On congratulating a neighbour on his possessing an exceptionally fine piece of Wheat, he informed us with a shake of the head that the crop was full of bunt, notwithstanding the fact that the seed was properly dressed. The dressing used was one with a fancy name, "anti-something or other," but it was evidently quite ineffectual. How long will it take to convince farmers that the safest and most effectual dressing is powdered blue vitriol, and that fancy mixtures are often only adulterated and expensive forms of the same article with the strength reduced below the point of efficiency.

We are still able to keep a couple of skerries working amongst the Turnips, which would have been impossible before the advent of string binders. The real stress of harvest work does not commence now until the time of stacking. As we have little laid corn there are no men occupied in mowing this year, except in the always necessary opening out.

The Clover fog has been a little too strong for the lambs, which have scoured a little, and we have removed them to old pasture, where they are receiving Cabbage ad lib. We shall fold them on the remains of the Cabbage at once. The Kale is nearly ready for stocking, so it will be ready to follow the Cabbage up with. The red Clover will now be stocked with ewes until we have some Barley stubbles cleared for them. Those who want early lambs must put the ram with the ewes at once, so that the lambing may commence by the end of January. Put the ewes in a good pasture, and give them an allowance of old Barley, say $\frac{1}{2}$ lb per head per day.

Strong pigs are still making fair prices, but suckers are very cheap; we saw some very good ones at 14s. per head. Hens are beginning to moult, and eggs are diminishing in numbers; price, thirteen for one shilling.

R.A.S. and Park Royal.

To the President and Council of the Royal Agricultural Society of England.

Gentlemen,—As a member, and one interested in the welfare of agriculture, I deeply deplore the failure of the recent show. My personal experience is probably that of many. I went to London to attend the show on the opening day (Tuesday), leaving Birmingham by an early train, arriving on the show ground soon after ten o'clock. The stand allotted to my firm (who have been exhibitors for many years) was practically unapproachable for mud, and a sleeper road in the centre of the avenue conveyed those few people who came along, and who were able to get by if there were no carts or waggons in the way. I understand even when the ground had dried passers-by kept to the sleeper road 10yds from the stands, and the rules forbid representatives to solicit away from their stands. It took me until one o'clock before I could get any official on the spot, and when at last an attempt was made to effect some improvement, an object lesson was afforded of the way in which the money of the members of the society is woefully squandered. After two o'clock a dozen or so navvies were brought on the scene, many of them much the worse for drink, and were left standing about for some time, some with shovels, some without, but apparently not knowing what they were to do. Shortly after a cart appeared, followed by a second one, and the spectacle was observed of some twenty navvies crowded round one cart, evidently enjoying the fun of pretending to work. This sort of thing went on till nearly four o'clock, when I left the show ground in disgust, the whole of my time and expense in going to the show having been thrown away.

Many contributed to the fund to assist the council of the society in purchasing and equipping a permanent site, whilst doubting the wisdom of going so near London; but it was expected that, however unsuitable the geographical position, the council would choose a site in every sense favourable. It is self-evident that part of the site is flat, low, and in case of bad weather likely to be a veritable bog, with the disadvantage of being comparatively inaccessible. Whoever were responsible for the selection of such a position have loaded the Royal Agricultural Society with a "white elephant" so far as its becoming a successful agricultural show site. The news of the unfavourable position and prospects of the show travelled far and wide long before the date fixed for the show; and when, within a reasonable period of the date for holding the show the general public learnt that the ground was in a most unsuitable condition, the death blow was sounded so far as the success of the show was concerned. In order to convince you that outsiders could see the risk bad weather would involve, my brother, who visited the ground before any shedding was put up, ordered a

floor, which has cost £7, to be laid at our stand to meet contingencies. Never, in the whole course of our attendance at shows before, has a floor been laid at our stand. This speaks for itself.

The grievance as to the site was small as compared with the negligence displayed to the many exhibitors of implements, medicines, condiments, &c. A very strong word might be applied to the action of the society in receiving thousands of pounds, and then allotting space in such impassable or out-of-the-way places as to be practically valueless. It goes without saying that unless exhibitors like ourselves receive fair treatment many will decline to exhibit, or take less space. It would appear to a large majority who are not in touch with the action of your council that the show ground has been arranged without any regard to the feelings or desires of would-be exhibitors, and with all due respect to their judgment, I am strongly of opinion that they should have consulted a number of representative firms who have been in the habit of showing for some years as to their views on the best methods of placing the shedding. Not only so, but even the want of arrangement in the avenues was most striking.

The exhibitors who occupied the various sheddings paid thousands of pounds in fees and outlay in fitting up their respective stands and equipping their staff. No consideration whatever appears to have entered into the council's mind as to the absolute throwing away of all this expenditure, although it must have been well within their knowledge when they received the entrance fees, or at any rate at a period long prior to the opening of the show, that this expenditure would be absolutely thrown away, and the various exhibitors should have been advised, with the option of having their monies returned. Granted the state of the ground and weather being everything to be desired, the positions allotted to many in the implement yard were far inferior to others. Consequently, why should the pro rata charges for space be the same? I am now referring to the special shedding. Much ground that could have been utilised for the show was wasted, and much ground that was utilised was absolutely worthless. For instance, a vast stretch of ground, high and comparatively dry, facing the west entrance, remained unutilised; also another large tract on the left of this, and further open space facing the east entrance. The disgraceful condition of the approaches to the stand occupied by my firm was bad enough, but some in the smaller avenues were absolutely desert places to the visitors to the show, as no one would venture along them. Why was it that some large refreshment booths and wine and spirit stands were placed in the very best positions, when they could have equally as well accommodated the public in some remoter portion of the ground?

The treatment accorded to some of the old exhibitors in comparison with that accorded to exhibitors who have but recently come into existence (and I am not sure if some were not at the show for the first time) was striking, and no consideration appears to have been given to such exhibitors who were prepared to take up a larger amount of space than hitherto, and to spend a considerable sum of money in making their stands tasteful and pleasing to the eye. What inducement is there for exhibitors to make expensive and effective fronts if they are to be banished into obscure positions? Certain firms, whose names could be mentioned, have year after year been accommodated with prominent front positions, and it would be interesting to know why the same rate is charged for front positions as for back and side. To sum up the whole matter, the want of success of the show is due partly to its unsuitability; and, so far as exhibitors who attend for the purposes of business are concerned, mainly due to the want of practical knowledge of those who have had to deal with the planning out of the show ground.

The very unsatisfactory impression already made on the exhibitors, visitors, and representatives, will not add to the better chance of success another year. All those representatives attending stands badly placed, &c., will, in the ordinary course of conversation with their clients, in all parts of the country, still further prejudice the society and Park Royal. This point may not have occurred to your society, but you must not forget that many exhibitors have most of their staff representatives at each Royal Show, and they are drawn from all the districts in England, so that after a show like the Royal they do not hide their light under a bushel, and their opinion is fully expressed.

It is evident if the Royal Show is to maintain its position, and not to retrograde, it is desirable that the council should consist of men of sufficient ability to contend with the evils that I have pointed out. I am willing to make every allowance for the difficult position the society was placed in, but as the disaster was predicted months ago, there was ample opportunity for the society to have known whether or not any arrangements could be carried out to make the show ground suitable.—I am, gentlemen, your obedient servant, LAWRENCE C. TIPPER, Veterinary Chemical Works, Balsall Heath, Birmingham, July 30, 1903.

ESTABLISHED 1832.

No connection with any other firm of a similar name.

Successors to the late BARON VAN PALLANDT.

ANT. ROOZEN & SON'S

SPLENDID

HYACINTHS, TULIPS,

AND ALL OTHER

DUTCH, CAPE AND EXOTIC BULBS & PLANTS

Our Descriptive CATALOGUE of the above, containing FULL CULTURAL DIRECTIONS and particulars as to FREE DELIVERY, will be sent post free on application to our Offices at OVERVEEN, HAARLEM, HOLLAND, or to our General Agents—

Messrs. MERTENS & CO.,
3, CROSS LANE, LONDON, E.C.

STRAWBERRY PLANTS.

All the Leading Varieties from the open ground and in pots.

Priced Descriptive Circular Post Free.

DICKSONS Nurseries CHESTER

RIVERS' FRUIT TREES, ROSES, VINES, FIGS, ORANGES, AND Orchard-House Trees.

A LARGE AND SELECT STOCK
ALWAYS ON VIEW.

ILLUSTRATED & DESCRIPTIVE CATALOGUE,
Post Free, 3d.

THOMAS RIVERS & SON,
SAWBRIDGEWORTH, HERTS.
HARLOW STATION, G.E.R.

CLIBRANS

CARNATIONS & VIOLAS

Our New List of the above is now ready. It contains the choicest varieties in every class.

GRATIS AND POST FREE.

CLIBRANS BULB CATALOGUE

Describes the choicest and best of all classes of Bulbs; illustrated.

GRATIS AND POST FREE.

CLIBRANS STRAWBERRY LIST

Enumerates and describes the newest, choicest, and best varieties.

GRATIS AND POST FREE.

ALTRINGHAM & MANCHESTER

1,500,000 BULBS.	
Spanish Iris, Yellow, White, and Blue	7/6 per 1000.
Crocus, all colors	5/6 per 1000.
Sir Watkin Narcissus	5/6 per 100.
Horsefieldii	5/6 per 100.
Trumpet Narcissus	7/6 per 1000.
Glory of Leiden Narcissus	6d. each.
Madam de Graaff	3/6 each.
Sweet Scented Pheasant Eye	
Narcissus	5/6 & 7/6 per 1000.
Mixed Narcissus	5/6 per 1000.
Double Daffodils	5/6 & 10/6 per 1000.
Tulips, Mixed (choice)	2/6 per 100.
Single Lent Lilies	3/6 per 1000.
Snowdrops	5/6 & 7/6 per 1000.
Strawberry Plants	1/6 per 100.
SEND FOR LISTS BEFORE ORDERING ELSEWHERE.	
Cross & Son, Daffodil Nurseries, Wisbech.	

The Royal Nurseries, Maidstone, Kent.

GEORGE BUNYARD & CO., Ltd.,

Are now Booking Orders for early delivery of the very best

NEW AND OLD **STRAWBERRIES**

In pots for forcing, or as runners for open culture true to name.

They offer the Largest Stock and the Best Plants in the Trade.

REVISED CATALOGUE, including the New Perpetual Bearing Kinds, now ready, free.

TO THE TRADE! DUTCH BULBS

FRENCH BULBS! and ENGLISH BULBS!

SEE OUR SPECIAL CATALOGUE OF BULBS.

Containing List of all the Best Varieties of HYACINTHS, TULIPS, CROCUS, LILiums, DAFFODILS, SNOWDROPS, IRIS, PÆONIES, &c., free on application. Please compare our prices before sending your orders abroad.

WATKINS & SIMPSON,

SEED AND BULB MERCHANTS,
12, TAVISTOCK ST., COVENT GARDEN, LONDON, W.C.



Journal of Horticulture.

THURSDAY, SEPTEMBER 3, 1903.

Quid pro Quo.

THINGS are not always what they seem, and it is tacitly admitted that in the gardening world they are not quite as they should be. Evidence of it is not wanting, inasmuch as that occasional letters crop up in our gardening papers anent wages, lodgings, hours, and holidays, all of which may be summed up as the gardener's *quid pro quo*, for that is really what the quartette conjointly amounts to.

That there are grievances in this direction few will deny, emphasised the more that now and again some happy examples of this *quid pro quo* are told in Gath, bringing into more forcible contrast a great deal that is seen and felt, but mentioned only with bated breath from over the garden wall. The force of good example is not under-estimated, and all honour to the few who in spontaneously adopting the live and let live principle acknowledge that the gardener is a man worthy of his hire.

This is good so far as it goes, but it neither goes far enough nor fast enough to reach and keep up with this age of push and progress; and it wants pushing. The thing, however, is too big, too weighty, ever to advance save by infinitesimal degrees under individual effort or isolated example, and until the whole gardening fraternity agree upon concerted action will, practically, "get no forrader."

Union is strength. In a great combine lies the crux of the question, and that, as a remedy, presents itself to most minds in the form of a scarecrow, so enwrapped in the miserable rags and tatters of hardship and failure which trades' unions have left in their track as to frighten the peaceable gardener from even its contemplation. So gardeners think of it and shrink from it in the vague hope—that hope which springs eternal in the

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

human breast—that somehow, at some time, things will right themselves; and, of course, there is the friendly advice always to hand, if he does not like it he can leave it. Is he not free? Yes.

Free, yet in fetters held till his last hour,
Gyves that no smith can weld nor rust devour.

A poor consolation, a wretched remedy. But "our remedies oft in ourselves do lie which we ascribe to heaven." In the dim and distant future things may right themselves, but benefits which are wholly and solely for posterity do not commend themselves as grateful or comforting to those bearing the burden of their own particular day.

Granted that the only remedy lies in concerted action, why is it such a hideous thing to contemplate? Surely from the misunderstanding that such will result in setting class against class, master against man. Is it not a common mistake springing from other lines of life in the working world, but from lines which do not run parallel with ours? And is it not a stupid mistake? Difficult to deal with, for, as Schiller says, against stupidity the very gods fight invictorious. However, it is hoped our case is not so hopeless as that; yet it is strange, passing strange, that whenever this theme is broached a vision of strikes and all that follows in their wake blinds the sight of otherwise far-seeing men. Ere attempting to focus the matter on a less distorted mirror, it may be as well to consider the grievance under its four heads, for to be clear and defined in the knowledge of what is wanted is, in a measure, paving the way to obtain it, and "Thrice is he armed who hath his quarrel just."

Wages, at first sight, impress one as being the most important phase of the question. With some it is the alpha and omega of it, and "nothing comes amiss (bad lodgings, long hours, and no holidays), though money come withal." The very nature of a gardener's work prohibits all hope of its ever being directly measured by money. He is so indissolubly bound up with it—his work—that it is impossible to see the dividing line between his own time and his master's: impossible, for there is none, and when he is not actually working he is thinking and planning for its advancement, not his own. The man who can switch off gardening from his mind at home, at church, or anywhere else, at any time, morning, noon or night, is a *rara avis* seldom caught, and when caught will be invariably found posing under borrowed plumes and only a counterfeit of the true garden variety. A liberal-minded master (liberal-handed, too) was wont to say a gardener's work is never done, and never paid for. Would that there were more such masters, for hosts of men, and good men too, are working for a pittance but little more than a labourer's pay.

The wages question is, of course, open to arguments *ad libitum*, and might be prolonged indefinitely, but *cui bono*? A gardener's work is not reducible to a fixed quantity, and the mass of facts which might be advanced are superimposed upon the principle that it cannot be measured by money.

The lodging, cottage, house, bothy, or whatever style or title our gardener-tenant chooses to dignify his dwelling by, must always be considered an important part of his *quid pro quo*. Masters who have provided their men with comfortable, decent, and adequate accommodation in this respect are, it is feared, the exception rather than the rule; and many a man who holds a fairly good position in the gardening world is quartered in a scanty, ill-built, badly situated structure detrimental to his physical welfare, his own self-respect, as well as being derogatory to his rank as commander-in-chief of the gardening staff.

Men are oftener judged by the house they inhabit than by the clothes they wear or the wages they are paid. There has been but little or nothing said about the head gardener's abode, whilst there has, of late, been much talk about the young men's quarters—the bothy. Plans of bothies, and prizes for them. Illustrations of fine bothies and glowing descriptions of the benefits conferred on those who dwell therein. Baths, reading-rooms, separate dormitories, inside; cricket pitches and what not outside, that those who hear the praises trumpeted forth of these generous doings for young gardeners may, in the spirit of emulation, go and do likewise. Very good; very good indeed, so far as it goes, but it does not go far enough when the unselfish gardener, having shown his visitors this spirited example of thoughtfulness for his pupils, feels constrained to offer an apology for his own poor habitation when entertaining them in it (which has actually occurred).

The spirit of loyalty which prompts men to invent all

sorts of excuses to shield masters from the onus of shortcomings towards themselves is commendable, commendable to a fault. Were ever men so utterly unselfish where they themselves are concerned? I trow not. Truly, they make the best of things, even comforting themselves with the polite fiction of heading their correspondence "The Gardens," when perhaps dwelling outside in the background or domiciled in a gate lodge. A few who follow these remarks may, of course, have in their mind's eye some head gardener's house really worthy of the man and his position; if so, perhaps they will kindly keep it there—in their mind's eye—for use ere conclusion.—QUIZ.

(To be continued.)

Bedding in London Parks.

Each year the Royal parks of London attract hosts of gardeners, whose chief object in visiting them is to note the high-class bedding. But for one that has the privilege of seeing the actual bedding, a hundred have not; and for all such, the following notes may stand in stead. And even though the choice bedding cannot be very generally followed, one likes to read of the achievements in this line, and, so far as circumstances may permit, to follow it.

Hampton Court.

stands in the front rank as a place where choice flowering and foliage plants are arranged with experienced and well-trained skill by the superintendent, Mr. J. A. Gardiner.

The long flower border facing the fountains is a splendid pattern of an English summer garden display in these days. The groups or masses of plants would possibly be more effective if planted in larger breadths, but the show at this season cannot fairly be criticised.

On the brick wall which backs the border we find a continued series of rampant, healthy climbers, which include Roses, Vines (*Ampelopsis*), *Clematis viticella* varieties, and also the Traveller's Joy; also Everlasting Peas, *Magnolia grandiflora*, *Kerrias*, and other subjects; the little Toadflax, too, clings thickly from every seam.

The border itself, which is broadly margined with smooth grass, and has a line of variegated Cocksfoot Grass and purple Pansies all along the front, contains showy masses of the following plants, named as we walk along. Be it noted that all the taller plants, *i.e.*, *Humea elegans*, *Montbretias*, *Hydrangea Hortensia*, &c., are not in the middle or at the back, but some brought forward to give breadth to the view. Thus: Single and double Hollyhocks in endless variety (at the back); with *Lilium tigrinum*, *Plumbago capensis*, Sunflowers, *Fuchsias* galore, particularly fine being *F. gracilis*; Maize, *Abutilons*, *Salvia splendens*, and *S. Horminum*; *Begonia fuchsioides*, *ascotensis*, *weltonensis*, and tuberous varieties; *Solanum jasminoides*, *Dahlias*, *Heliotropes*, *Iresines*, *Lantana delicatissima*, *Phloxes*, *Lilium Harrisii*, *Nicotiana sylvestris*, *Streptosolen Jamesoni*, *Erigeron speciosus*, yellow Privet, *Miscanthus gracilis* (*syn. Eulalia*), *Cosmos bipinnata*, *Alocasia antiquorum*, *Abutilon Savitzi*, *Kochia scoparia*, the recently "discovered" swamp Cypress, and besides these there are *Asclepias tuberosa*, *Pentstemons*, *Antirrhinums*, *Hemp* (at the back), *Acacia lophantha*, *Galega officinalis* and *alba*, Ivy-leaved and Zonal *Pelargoniums*, *Bouvardias* (*Humboldtii*, *corymbosa*, and others); *Hydrangea paniculata*, *Ricinus Gibsoni*, *Verbenas* (dwarf); *Gladioli*, *Cannas*, *Celosia pulmosa*, *Coreopsis tinctoria*, *Senecio clivorum* (new), *Kalosanthes coccinea* (in front masses), *Verbena Miss Willmott*, *Tagetes lucida*, a dwarf yellow species; *Salpiglossis*, *Justicia carnea*, *Lobelia cardinalis*, *L. syphilitica*, *Arctotis grandis*, *Francoa ramosa*, *Agapanthus umbellatus*, *Alströmerias*, *Achillea "The Pearl"*, *Gypsophila*, *Malopes*, *Oenotheras*, *Monardas*, *Asters*, *Poppies*, and *Pyrethrums*.

The beds, even in such a sunless year, are very bright and fresh, the combinations in some of the best being formally noted hereunder.

1. A large, flat, oblong bed (27ft by 15ft) was exceedingly rich with selected varieties of crimson and scarlet tuberous *Begonias*, remarkable for their erect, bushy growth, with large flowers and great floraison. Mixed with them was Golden Feather *Pyrethrum* and *Fuchsia gracilis*; also a good sprinkling of *Grevillea robusta* (1½ft high), and *Solanum Warscewiczii*. The bed was edged with *Echeverias*.

2. Foliage bed (27ft by 15ft): *Acalypha musaica*, dense and strong, 2½ft high, at each corner, sides, and middle. *Iresine Herbstii*, and *I. Lindenii*, over 6ft, and pyramidal *Lantana delicatissima*, fourteen large plants. *Abutilon Savitzi*, seven plants. Also golden cut-leaved Elder, *Fuchsia gracilis*, and *Grevilleas*, the whole edged with *Anthericum Liliago variegata*.

Some of the other beds will be noted, along with the Hyde Park and Regent's Park bedding, in a succeeding paper.—J. H. D.



"Briaring."

I have had my say on Briar standards, and am tempted by its courteous reception to have my say about "Briaring," especially as November will soon be in sight. "Briaring" is a very cheap and pleasing way, for those who can take it, of enlarging one's Rose garden. After the first year I quite gave up taking out a spade: a very small and handy mattock and a small saw I found quite sufficient. Instead of hammering away at huge old stocks, we looked out for two-year seedling plants, and seldom spent time on any that were deeply rooted. I say "we," because my "groom and gardener" factotum was equally enthusiastic, and soon became very skilful. He had knowledge as well as zeal, which is always desirable. "Have you shaken the post, John?" "No, sir, but I will!" is perhaps zeal without discretion. Nor did that other cleric fare much better, who forgot the alms-dish, and sent John, who was also verger, into his study for it, with the result that he took the silver biscuit tin and brought it up to his master with the plaintive remark: "Been all round sir, but they won't none of them have any" (!)

There are Briars *and* Briars, as has just been remarked, and a personally conducted tour of the kindly lent hedge admits of a careful and needed selection. My experience was that the smooth-wooded Briars were almost invariably very inferior, and that the more prickly the stem the more satisfactory the produce. One other plan of mine I will mention, as neglect of the precaution accounts for many sickly and dying Rose stocks. After budding, and when the height of the standard was absolutely decided, I used to apply a styptic to the open wound at the top, where, unless the bud be an extra strong grower, it will not bark over, and is liable to die down. I give my recipe. Styptic for Rose-stock wounds:—

9 ozs. of pitch	1 oz. of leeswax
1 oz. of resin	1 oz. of tallow

Put in a glue pot, melt together over a slow fire, and apply hot. This mixture is also useful in late pruning when there is any tendency to bleeding.—A. C.

Briar v. Manetti.

So "Briar v. Manetti" has not lost its ancient power of stimulating correspondence and argument. Well, I am still ready to take a part, as I was a quarter of a century ago. I did not suggest that I would "sweep away the Manetti from the face of every professional Rose garden," but that it was "useful for indoor propagation and for such strong growers as Crimson Rambler and Penzance Briars," though I thought it should not be used even for these. The Penzance Briars will, I suppose (I have not tried, as I do not grow them, considering them ridiculously over-rated) strike as easily from cuttings as other Briars. The Manetti is, or, at all events, has been, of enormous use to Rose-lovers for winter grafting. Without it, amateurs would have had to wait much longer for the dissemination of new varieties. I have also seen large breadths of plants budded on it in Rose nurseries, but have generally been told they were for America, or some such use.

"Herefordshire Incumbent" gives a quotation from Mr. William Paul's "Rose Garden." Let us have another—9th Edition, p. 167, year 1888:—"The Manetti is desirable for Roses in pots, and admissible for hardy kinds when an extremely vigorous growth is desired. It has been recommended for kinds of delicate growth which do not thrive well on the Dog Rose, but my experience does not uphold the recommendation. If a change of stock is necessary for such, it would seem that one of a *finer*, *not coarser nature* than the Dog Rose should be employed. That the plants grow more vigorously on the Manetti the first year we do not deny, but their subsequent decline is also more rapid."

The italics are Mr. Paul's, not mine, and the popularity of the Briar cutting as opposed to the Manetti has immensely increased since 1888. "Herefordshire Incumbent" gives another quotation from a writing "in the beginning of the 60's." I do not think Briar cuttings were used at that time. I knew how to prune a Rose then as well as I do now; but, at any rate, we have learned something, I hope, in the past forty years.

I am much surprised at the statement of the foreman at King's Acre Nurseries. Does not he use Briar cuttings, and raise them himself? But I am almost inclined to think that my courteous opponent thinks I was comparing Manetti with the Briar standard, as he speaks of the King's Acre Nurseries purchasing stocks; whereas, of course, I was comparing it with the Briar cutting. "A. C." and I do not purchase our standard stocks, but get them with our own hands. I have budded some standard

stocks every year, I believe, since about 1874, and never one to the best of my knowledge that I did not get out of a hedge with my own hands.

Does "Herefordshire Incumbent" read the Journal every week? It was not I, but "Surrey Hills," who "introduced the subject of budding on the Manetti stock four inches below the ground." I admit that the parallel of too-deeply planted Roses putting out roots on the shoots, and Vines throwing out aerial roots is not strictly analogous. He may call it a hastily-written and ill-considered simile, but each is an effort of Nature to remedy want of health and an unsatisfactory state of things. And "the conclusion of the whole matter from the writer's point of view" is that the Manetti is *not* an "all round indispensable stock." Certainly not "all-round": I thought all admitted that; and certainly not indispensable for amateurs, for I have dispensed with it for many years, and intend to continue doing so.

I have given it good trial; yes, and I have had those grand-looking maiden plants on it 6ft high, but with uncommonly few good blooms on them. With me, as with Mr. William Paul, they did *not* form "grand cut-backs next year," but their "decline and fall" was more notable than their rise. I should very much like to show Roses from my Briar cut-backs against those from the Manetti cut-backs of my brother Incumbent in the West; but Rose shows in that part of the country are too far for me now.—W. R. RAILLUM.

Kingswood (Bristol) Show.

(See Illustrations on pages 215, 217.)

The Kingswood Show was again favoured by good weather on August 20, with the result that there was a splendid attendance, which must in itself be very encouraging to the secretary, Mr. Truebody, and his committee, who, after a hard fight, have succeeded in establishing an annual show in this rising and thickly populated suburb of Bristol.

The silver cup presented by the society for the largest number of points in the open was won by Mrs. E. Jefferies, of Clifton; and a gold medal for the highest number of points in the plant classes was secured by Captain Belfield, of Frenchay.

The competition in most of the classes was very keen, principally in the group of plants arranged for effect, the premier award being awarded to Captain Belfield (W. Rye, gardener) for a very pretty combination, principally yellow and blue. The Dahlia being a favourite flower in the district, there were numerous exhibits, the judging of which had to be taken by points, so close were the merits of the blooms.

The fruit entries were few, and the fruit, with the exception of a collection, and the Peach and Nectarine classes, was of a very poor quality, the late inclement weather having much to account for. In walking round the outlying district previous to the show, it made one feel melancholy to see the smallness of the crops of fruit; just one Apple or Pear peeping out here and there among the leaves. The crop of Plums was totally lacking.

The cottagers' classes were decidedly good, the exhibits in many cases being far superior to those in the open. The judges were: Open classes, Messrs. Iggulden, Smith, Bannister, Rye, and Gairaway.

[Hereunder our reporter, who also took the photographs from which our illustrations were reproduced, supplies notes on the subjects figured at pages 215 and 217.—Ed.]

Six bunches of cut flowers. The winner here (class 10) was R. Eager, Esq. (gardener, F. Cave), Northwoods, near Winterbourne, Glos. Mr. Cave had Cymbidium Lowianum, Cattleya Harrisoniae, Allamanda Hendersoni, Cattleya granulosa, Epidendrum vitellinum, and Cyrtopodium insigne. Mr. W. Rye, gardener to Captain Belfield, Frenchay, near Bristol, was second. This is the first occasion for ten successive years that Mr. Rye has been defeated in this class, and even now it is by one of his old assistants, who, if I am not divulging a secret, rather chuckles at being able to turn the tables on the veteran grower, whose stand was well up to the average, but a staging of excellent Orchid blooms carried more weight, hence his defeat. He had *Pancreatium fragrans*, *Anthurium Andreanum*, *A. Ferrierense*, *Gloriosa superba*, *Statice profusa*, and *Eucharis amazonica*.

Dish of Peaches. For a well-coloured dish of good fruits (variety *Crimson Galande*) in class 24, Mr. E. W. Towell, gardener to Mrs. Gale Coles, Downend, was the leader.

For a collection of fruit in class 21, a Mrs. E. Jefferies was foremost, having representative samples of Moor Park Apricots, Noblesse Peach, Magnum Bonum Plum, Muscat of Alexandria Grapes, and a Melon.

View of the Epergnes. Though the photograph is not so clear as we should like it to be, the reproduction on page 217 affords a fair idea of the decorated epergnes (side view). They were quite a fine feature of the exhibition.

*Disa racemosa.*

The Disas are confined chiefly to South Africa. Under glass-house culture they succeed best when given a cool, moist, airy, rather shaded position, and a liberal supply of water all the year round. For compost, use good fibrous peat and sphagnum, with perfect drainage. The species we figure flowers during June or July, having flower stems 15in to 24in high, and the flowers are rose-purple.

The Week's Cultural Notes.

Growers of Moth Orchids, as the *Phalaenopses* are called, have this season had anything but a pleasant time of it, long spells of dull and wet weather relieved by only a few sunny days not being at all conducive to the health of these heat and light loving plants. It is not exactly a question of temperature, as this is easily arranged; but no amount of fire heat or judicious moistening can compensate for the loss of the brisk, buoyant heat caused by the sun striking on the glass. Make the most use of the sun heat and light by always keeping a little warmth in the pipes and slight ventilation on top, this keeping the leaves comparatively dry, and allowing of the blinds being kept up until almost the middle of the day.

One of the most difficult members of the genus to cultivate is *P. Lowi*, and plants that are weak and poorly grown now stand a poor chance of coming through the ensuing winter in safety. In many cases this plant is quite deciduous, losing its leaves quite early in winter. There is then all the more need of care now, that the crowns and foliage shall be well developed and the roots attain a good hold on the moss or block on which it is grown. Different specimens behave in rather different ways under cultivation, making it necessary for those in charge to study the needs of each individual plant and vary the treatment accordingly, not treating all alike, whether growing, resting, or preparing to rest.

When only a small number of plants of *Cypripedium Schlimi* are grown it is very seldom out of flower, and possibly this accounts for its somewhat weak constitution. They are lovely little flowers, and one hesitates before cutting them for the sake of the plant's health, though it is strictly necessary for weak or badly rooted specimens. When well rooted and established there is little trouble as a rule. There is no doubt that *C. Schlimi* likes a very abundant water supply all the year round, and the whitish muddy deposit often seen upon the leaves of imported plants shows that they grow naturally in swampy positions.

The temperature for *Schomburgkias* that are throwing up their spikes may be raised a little if these seem slow in opening their flowers. In a cool house I have known *S. tibicinis* to be so long thinking about it that eventually they never opened at all, and the strength of the plants was wasted upon a barren and useless spike. Pulling the roots about at this late season would have the same effect probably; at all events, it is unwise to do so. *Lælia superbiens* is very similar in habit, though, of course, much larger growing, and here the same thing applies.—H. R. R.

* The Travels of an Orchid Hunter.

(Continued from page 188).

"The *Cattleya Trianae* has been found for years near the town of Ibaguë in the State of Tolima—a little more than one hundred miles from Bogota, in a south-westerly direction. This *Cattleya* is found under much the same circumstances as the others of its family, at an altitude of about 4000ft above sea-level. To reach it, it is necessary to ascend the river Magdalena for a considerable distance, and then land on the west bank. There is little of interest in the mule ride except the sight of the majestic snow-capped mountains, called the Paramo de Ruiz. These tower up to the height of 16,000ft, with a glistening top of eternal snow, which makes them conspicuous at a great distance from many parts of the road. *Cattleya Trianae* is found over a wide area, but all the plants taken from these parts, as well as from Pacho, La Palma, &c., must be brought to a small town called Honda; this is the principal port of the Magdalena river, about 600 miles from the sea. Swift running rapids prevent the larger steamboats going further up the river than Honda, but another line of boats has been built above the rapids. These vessels navigate the river for 300 miles more to a place called Neiva. Hundreds of mules, carrying every imaginable class of produce, throng the road from Bogota to Honda. On arriving on the banks of the Magdalena everything in the way of cargo, animals, and human beings that would reach the town must embark in a curious kind of raft, attached to a strong chain stretched across the river. Immediately the raft is loosened from the side, the force of the water carries it across the

river, the pulley running along the supporting chain. This raft is worked from six o'clock in the morning until six in the evening, the small fee of twopence-halfpenny being charged for passing a horse and his rider, three-halfpence for a mule load, and a penny for a foot passenger.

"A line of railway connects this place with the town of Honda, and runs to the part of the river where the steamboats land, called Yeguas, about four miles from Honda. At this point the mountains, which wall in the valley of the Magdalena, are very near to each other, and there seems to be no breeze whatever reaches the town; it is proverbially known all over the country as being very hot, and I have seldom seen the thermometer fall below 95deg., Fahr., in the shade. It is a curiously built little town, with neither system nor design in the architecture. It was at one time large and important, but earthquakes have proved its ruin, and now the fine churches, convents, hospitals, and even a beautiful stone bridge, have all been destroyed. Travellers to the interior must inevitably pass this way, and everyone will find lodging-houses and facilities for hiring mules, &c., to help him on his way to the capital. When I got on board the steamboat here to descend the Magdalena river, I practically said good-bye for the time being to four States of this magnificent country—Boyacá, Cundinamarca, El Cauca, and El Tolima. No pen or picture has or ever will be able to give more than a faint idea of the glories of this part of Colombia—of its riches in mines of emeralds and gold and silver; of its agricultural products of coffee, cocoa, and grain; of its trackless forests, with their exhaustless supply of timber and choice woods, its wealth of ornamental and medicinal plants, its bevy of gaudy coloured birds and curious animals, its snow-capped mountains and boundless prairies where the Indians have always roamed with perfect freedom: or of its commercial cities, with their rich and cultivated inhabitants. Even the most stoical Englishman who has travelled here and seen its beauties cannot help but regret that so many thousand miles divide this paradise from our own little island.

"The descent of the river Magdalena was made quickly and agreeably, and we very soon arrived at the port called Puerto Berrio. This is the port by which travellers reach the prosperous city of Medellin, one of the most important centres of the country, and the home of *Cattleya Dowiana aurca* and *Cattleya Warscewiczii*. Puerto Berrio has a special interest to all English Orchid collectors. A rough cross of wood on the edge of forest, on the higher bank of the river, marks the last resting place of Chesterton, the well-known Orchid collector, who did such good service for the firm of James Veitch and Sons, long before the wholesale plunder and extermination of the plants brought about by modern collectors.

"A small mountain town, called Frontino, has given, up to the present, all the *Miltonia vexillaria*, but the woods in the vicinity have become already pretty cleared. I had heard much about the plants to be found between the river Opon and the river Carare. These are two rivers which together drain the southern part of the State of Santander, and the land lying between them is a narrow strip less than one hundred miles wide. I descended the river to a place called Barranea bermeja, with the object of getting a canoe to navigate the river Opon. This, I was told, would require at least six men, well armed. The river is not navigable for more than fifty miles, and the distance is intercepted by fallen trees, while the forest between the two rivers is infested by hordes of hostile Indians. The first two days nothing extraordinary happened; the banks of the river were thick forest, and we saw no tracks of the Indians. Each night we camped on a sand-bank. I saw no Orchids, the land being too flat; but on the third day we passed many tracks of the Indians, and some abandoned huts. About mid-day, as we suddenly made a curve in the river, a shower of arrows whistled past us and fell far ahead; they had been aimed too high and shot with too much force. In the direction the arrows came from we saw nothing—not even a rustling of the foliage. We fired several times into the bush, and proceeded more cautiously. My companions would have turned back, some of them becoming afraid, but an unconquerable curiosity possessed me to see what there was in the way of plants on the higher ground. It was evident that the Indians knew by this time, all along the river, of our ascent, and more than once I saw dusky forms creeping stealthily away from the banks as the canoe glided in sight. I had been informed that the Indians were very much scattered over the country, and although they maintain a deadly hatred against all civilised human beings, the fact of our ascending the river would not be sufficient to make them congregate in numbers, and the stragglers along the banks, although hostile, are cowardly and afraid of fire-arms.

"On the fourth day, proceeding with great difficulty on account of the fallen trees, we came to some three or four small sheds, with plantations of maize in front of them; a few animal skins were lying about, but every one of the inhabitants had taken to the woods. The very emptiness of the huts showed that their manner of life must be of the most primitive kind. However warlike they are towards outsiders, there are accounts that they live together in the greatest friendship and good faith. We left the huts very much as we found them, and proceeded up the river. I had seen several very pretty *Oncidium*s on the banks, and I had begun to hope that we were clear of the Indians. On the night of the fourth day, we camped, as usual, on a sand-bank, not being able to proceed further on account of the bad state of the river. Knowing that we were in the very middle of the Indian territory, where, if they chose, they could overpower us

with numbers any moment, we passed the night somewhat nervously, with a very small fire, but with our rifles loaded, and while three slept the other three kept watch. Nothing happened to us that night, and early in the morning, after breakfasting, I started into the forest with four of the men, leaving the other two in ambush to watch the canoe, for fear the Indians should take away our only means of getting back to the Magdalena. I was delighted to find the trees on the rising ground from the banks of the river hung with fine clumps of *Miltonia vexillaria*, intermixed with *Oncidium Carthaginense* and several smaller Orchids, and I was priding myself upon reaping a glorious harvest. But that night all my plans were destined to be crushed. Everybody was in good spirits at our evening meal, but we had scarcely finished and lighted our roll of tobacco when the twang of an arrow, as it whistled past my head, startled everyone to his feet. In another moment one of our number was pierced with three of the deadly poisoned arrows, and mortally wounded. The moon was on the wane, and shed a miserable light for us to shoot by, while the savages could see us perfectly well by the light of our fire. Not a moment was lost in hiding ourselves behind the nearest trees, and we were scarcely placed when another shower of arrows showed us the position of the Indians. Seeing us retreat, they had advanced more into the open; at the same moment a blaze of fire poured out of five trusty rifles, and a terrible howl rose from the throats of the surprised and wounded Indians, who up to the present had not uttered a sound.

"In a moment every mark for us to aim at had disappeared, but we fired another volley in the direction they had gone. For some time after, the rushing sound in the forest informed us that they were retreating and taking away their dead or wounded. I thought they would return, but my companions believed that the report of fire-arms was so little known to them that one encounter would be enough—and they proved right. As soon as day dawned we carefully reconnoitred in all directions. However, on that side we found nothing but the trail of the Indians and the pools of blood left by the victims of our bullets."

The "Daffodil King" on Tour.—No. 10.

(Continued from page 193.)

Invercargill is one of the most recent of the important townships. It is from here that one makes arrangements for visiting Tasmania or Melbourne. Both here and at Christchurch and Dunedin Mr. Barr was asked to talk "Daffs." to the enthusiastic amateur gardeners, of whom there are a good many. Each place has its horticultural society, which is more or less prosperous. At Invercargill considerable alterations and extensions are likely to be made to the gardens and public grounds.

Wellington, the capital, is very limited in space, and curiously, the town stands on reclaimed land. The large steamers come close up to the quay to discharge and take in cargo. The surrounding hills form the better-class residential part of the town. As there is a general ambition amongst New Zealanders to make Wellington the commercial, as well as the legislative, centre, wholesale houses are moving their principal establishments to this place.

Here they have a so-called botanic garden, but it is a reserve more intended to keep the native trees, than to bring in exotics. By making walks throughout, the townsfolk have the benefit of the country air, which is fresh, as the situation rises to a considerable height. The recently appointed superintendent is a Mr. Glen, an old English gardener, who now occupies the house and property used by Mr. Bailey, now the Queensland botanist. It is a very pretty place, but unfortunately subject to floods.

One of the keenest Daffodil growers at Wellington is a Mr. Mason, an old Quaker gentleman, whose collection comprises many of the very earliest of English seedlings, which at home have been long ago discarded. His garden is one of the show places of Wellington, and every distinguished visitor is taken to see it. According to the amount of interest his visitors display, the owner devotes attention to them; and should they happen to have little touch with horticulture, he soon runs them round, and bids them Good-bye! Close by, a Mr. Gibbons carried on a nursery and seed business; and also near at hand there is an old Chiswick man owning a number of vineries, in which he grows Grapes and Cucumbers for market. This marketman (Mr. Waugh) was also a pupil of the late Malcolm Dunn, of Dalkeith.

At the time of Mr. Barr's visit to this part of New Zealand, there were no excursions to the great fiords, and he was unable to explore them. Instead of that he had a carriage ride through the mountainous parts of Wellington to the Wairapa. He describes the scenery and the foliage as grand, and he frequently came upon large patches of *Ranunculus Lyalli*, in its native quarters; also of *R. insignis*, on Mount Lyall, where the well-to-do people of Christchurch, who may be botanically inclined, usually spend their Christmas holidays. At that (the warm) season, the fields are usually covered by these two species.

New Zealand is not remarkable for its nurseries. Auckland has a nice little establishment; and here the veteran traveller saw the Japanese Plums more beautiful than at any other place, the trees being literally bent by the weight of fruits. Both

Dunedin and Christchurch have some small nurseries; but the largest seen by Mr. Barr was at Invercargill.

Mr. Barr's entry at Tasmania was at Launceston, "a remarkably nice town," where he was at once taken in hand by the Daffodil enthusiasts, some of whom possess many of the most expensive varieties.



Disa racemosa.



A New Carnation, Mrs. Lora Armstrong.

We have been favoured with specimen blooms of this new Carnation from Messrs. Wm. Watson and Sons, Clontarf Nurseries, Dublin, who send the following letter: "For Carnation Mrs. Lora Armstrong, we received the certificate of the Royal Horticultural Society of Ireland at the autumn show in Dublin, August 25. These blooms were cut on Monday by the gardener who raised the variety (Mr. J. Dowling, gardener to Mrs. Lora Armstrong, Carrickmines). We are sorry we have not fresh flowers, but the fact that they were cut then and staged yesterday will give assurance of the lasting qualities of the flower. You will notice the stout erect stems and thoroughly vigorous style of this hardy border variety." On arrival here the flowers were perfectly fresh; and what will attract attention at once will be the distinctive rich colour of the novelty. We are not far out if we describe the colour as a brick-red salmon. The blooms are of good medium size, smooth of petal, full and even, nicely scented, and possess a truly non-bursting calyx.

The Garden City.

Having secured a site for its first enterprise, the Garden City is in a fair way of passing from the nebulous condition of a benevolent dream into that of actual fact. An estate 4,000 acres in extent, near Hitchin, on the Great Northern Railway, and lying a little to the west of Baldock, is to be converted into the first Garden City. A sum of £50,000 was necessary to enable negotiations for the acquisition of the land to be completed, and this being forthcoming, an arrangement has been come to. The new Garden City will be within an hour's railway run from London; it stands from 250ft to 300ft above sea level, and is furnished with an abundant supply of water. But, having obtained the land, more money is needed to make a start with the foundation of this modern Utopia, where overcrowding and high rents are to be unknown, where smiling gardens and open spaces are to predominate, and where intellect and morality are to be the most prominent cults. Those anxious to embark in the enterprise are, however, frankly advised that they must not at this present state regard it as a safe investment, which is, at all events, honest, since it is, perhaps, too much to hope that the Garden City will prove at once an El Dorado and Utopia.

A Floral Arrangement.

The illustration on page 221 serves to show how flowers of different forms can be gracefully disposed and effectively posed, even though they are just common border varieties. The illustration is a sketch of a cottager's bouquet, and certainly it looks well "on paper," if it was criticisable in the original.

We have passed through the show season—at any rate, the summer shows are past—and we have all seen very different models in the floral classes. The bride's bouquets are very popular, but the table bouquets are seemingly out of favour, as well they might be, for they are stiff affairs. Bouquets have undergone considerable alteration in design during the past fifteen years; or it may have been that styles vary with districts. Going back to other days, the making of the show bouquet was an interesting event. Half a dozen of us would be wiring the flowers; one would be handing them as the maker wanted, and attending to the supply of raffia; and as the sides of the bouquet grew outward, and its form and finish began to show, the general interest rose, and suggestions and criticisms were rife. But the master-hand had won many a first prize, and he would neither be led nor driven: so the criticism fell flat, and the bouquet was at last admired by all. "She's gie mee." "A wee bit slack there." "Is that Rose no on the heavy side?" would be some of the comments to be heard.

We do not hold ourselves experts in bouquet making, but we have some opinion of our skill at wreaths. Possibly some of our friends may be drawn by this note and our simple illustration to lend their help, through these pages, in "bouquet making." We will welcome their notes, so will many of our readers. Books and writers on this important branch of art are too scarce.

Columbus's Tree Dying.

The sacred Ceiba tree, which Columbus is said to have planted in Havana, is dying, and the Temple, where the remains of the great navigator have for centuries been guarded, is crumbling away, and may soon be reduced to a heap of ruins. Yet neither the State nor the municipal authorities appear to be taking any particular interest in these facts. The old tree began to wither during May last, its branches withering one by one, until now it has scarcely a leaf upon it. A shrewd American in business in Havana is endeavouring to purchase the tree, with a view to sending it to the St. Louis Exhibition, and afterwards cutting up the tree into relics. The Bishop of Havana, however, hopes, in the event of the death of the tree, to secure the remains for the Catholic Church, whilst the Spanish Chargé d'Affaires thinks it ought to be presented by the Cuban Government to the Duke of Veraguas, Don Cristobal Colon, of Seville, Spain, the lineal descendant of Christopher Columbus.

Kadsura japonica, a Handsome Shrubby Climber.

This is a plant, like too many more, that is less met with in the greenhouse or conservatory than it deserves; in fact, it is in very few collections outside the precincts of a botanical garden that one does meet with it. It is, however, I think, worthy of a corner in every conservatory, or on a wall out of doors, as at Kew. Being a climber, with large and coriaceous foliage, not unlike that of the *Eurya japonica*, it is very suitable for the decoration of pillars, and to which it imparts a massive and pleasing effect all the year round. True, the flowers are relatively inconspicuous, but they are also exceedingly interesting on account of the Strawberry-like protuberances which form the receptacles. The flowers in appearance resemble the *Magnolia*. The petals are creamy white, and contrast well with the red and pink centres. The plant, as will be seen by the specific name, is a native of Japan, is half-hardy and evergreen. I believe that it is impossible to survive the winter with protection in some parts of Scotland. It is usually propagated by cuttings of half-ripened wood or divisions of the root, and does not appear to be very particular with respect to soil. A sprinkling of sand and peat, however, tends to produce a more prolific display of flowers. Altogether, the *Kadsura* merits more and general notice among gardeners for the above mentioned purpose.—D. C.

Fuchsias as Bedding Plants.

Among the scores of summer bedding plants employed throughout the country, I believe that none have stood the test of this uncongenial summer and retained their brilliancy so well as the Fuchsias, and I believe that they are gradually gaining favour as summer bedding plants.

Under no conditions can their handsome, pendulous blossoms be so efficiently displayed as when trained as standards or in pyramid form, and used over a carpet of *Violas* or *Pansies*, or any dwarf growing plants that will harmonise or contrast with the colour of the *Fuchsia* employed. Varieties that have a tendency to trail should be discarded if standards are wanted, but those like *F. tricolor* and *F. Sunlight* can be used as edging, or beneath the taller, upright flowers. Such robust kinds as *Rose of Castille*, *Mrs. Marshall*, *Mrs. G. Rundle*, and *Scarcity* are robust growers. Select cuttings at any time of the year, if placed in gentle heat, will root readily, and should be encouraged to make one strong growth, removing all side breaks until the desired height is attained, supporting this with a stout stake, when they may be allowed to break away and form a good head.

Fuchsias that have been employed in this manner here have been a mass of flowers from the third week in June, and have every appearance of remaining so until the beds will be required for spring bedding subjects. Cuttings of the variety *Scarcity* taken now and allowed to make a shoot of about a foot in length by the time the bedding for summer effect comes around, will be found handsome for planting, slanting form, in stone basins or vases, letting the pendulous blooms hang over the sides all around. Ivy-leaved *Pelargoniums* from cuttings taken now, and intended for standards or pyramids, will have to be grown on twelve months, when they may be afforded a slight rest during the winter previous to bedding them out, by laying them on their sides under the stages of the greenhouse. Pot them up, and bring them to the light in January twelvemonth, when they will be good for summer 1905. Of course, this is for large plants.—CHAS. J. ELLIS, Warren House Gardens, Stanmore.

Glenville Gardens, Waterford, Ireland.

There is no more charming place on the banks of the River Suir than Glenville, the palatial residence of Alderman W. G. D. Goff, J.P. It is within easy distance of the ancient city of Waterford, and is



Kingswood Show: First prize fruit collection.

remarkable for its beautiful pleasure grounds. There are several expanses of water around the dwelling-house which have been planted by the present head gardener with the choicest varieties of Water Lilies, supplied by Messrs. Dreer, the celebrated raisers of aquatic plants, of Philadelphia, U.S.A. A number of the Nymphæas are now in flower, and they are certainly well worthy of a visit.

Glenville Gardens have long been famous as one of the very few Irish establishments that cultivate Orchids well. Mr. Innes very kindly ciceroned me on the occasion of my visit to Glenville. The Orchid house is a splendid structure, no expense having been spared on the erection and completion of same by the worthy owner. Amongst the collection of Orchids the following struck me as being worthy of note: *Thunia Marshalliana*, *Cattleya labiata*, *Brassavola Digbyana*, *Oncidium ampliatum majus*, *Gongora atro-purpurea* (the Punch and Judy Orchid), *Dendrobium chrysotoxum laurissimum*, *D. Wardianum*, *D. thyrsofolium*, *Oncidium Papilio majus*, *Aërides odoratum*, *Odontoglossum vexillarium*, *Anguloa Ruckeri superba*, *Dendrobium infundibulum*, *Lycaste Skinneri*, *Odontoglossum citrosum*, *Epidendrum prismatocarpum*, *Lycaste Deppei*, *L. xytriophora*. There is an immense variety of *Cypripediums*. I saw some fine specimens of *C. Mastersianum*, *C. niveum*, *C. callosum*, *C. Rothschildianum*, *C. Exul*, *C. Lawrenceanum*, *C. Lowianum*, *C. Chamberlainianum*, and *C. barbatum*.

Mr. Innes showed me a magnificent lot of *Cypripediums* of his own raising. What took my fancy was the scrupulous neatness and cleanliness of the Orchid and other houses.

Here, too, was a beautiful lot of Malmaison Carnations in flower, and the plants are right well grown. Zonal Pelargoniums occupy a prominent position, all the very newest and best varieties being grown, and I think if you travelled all Ireland you could not beat the collection of Palms and Ferns. The plants are beautifully healthy, and seem to be exceptionally well treated. A *Musa Cavendishi* was showing a great abundance of fruit. There is also a fine house of Black Hamburgh Grapes, and a house of Madresfield Court, Foster's Seedling, and Buckland Sweet-water.

In the late vinery one can see splendid Black Alicante, Gros Colmans, and Muscat of Alexandria, all well grown. There is a bumper crop of Tomatoes, the variety being Glenhurst Favourite.

Bedding out is a large undertaking at Glenville, Begonias, Ivy-leaved Pelargoniums, Asters, Hollyhocks, &c., being very largely used.

The kitchen garden is a thoroughly up-to-date one, and one can note Sutton's Flower of Spring Cabbage. This I believe to be one of the best Cabbages in cultivation. Mr. Innes is a noted prizewinner, and has gained several distinctions at local shows. Taking Glenville all in all, it reflects the greatest possible credit on its popular proprietor and on the amiable head gardener.—J. A. P.

Gadding and Gathering.

The Greenhouse at Kew.

Amongst the subjects now in flower in No. 4 house in the Royal Gardens, Kew, are the following: *Hydrangea paniculata grandiflora*, *Cuphea ignea*, *Bredia hirsuta* (a pretty rose-mauve flowered Japanese Melastomaceous shrub). It is very pretty mixed with the *Cuphea*. *Capsicum nanum fulgens*, *Capsicum annuum*, *Solanum Melongena* (Egg Plant) in a number of distinctive varieties, in 8in pots, and all well fruited. *Lantanas*, in 9in pots, the plants 2ft to 2½ft through, and as high. There is a mixed selection of varieties, the chief being *A. Cleveau*, deep rose with yellow centre; *hybrida*, rich deep crimson; *Drap d'Or*, a golden variety; *Naiade*, a soft white with primrose centre; and *Boule Blanche*, another large flowered white.

Another feature is the *Begonia semperflorens* varieties; also *Statice sinuata*, *Mignonette*, *Begonia Count Zeppalin* (the pretty semi-double scarlet), *Hydrangea Hortensia*, *Campanula pyramidalis*, and *C. p. alba*; *Fuchsias*, *Coleuses*, *Humea elegans*, *Rivina humilis*, *Oranges*, *Abutilon Savitzi*, *Agapanthus umbellatus*, *Salvia mexicana* (a tall growing, graceful, new species, with deep blue flowers of moderate size), *Vinca rosea*, and others; *Crinum Powelli alba*, *Streptosolen Jamesoni*, *Achimenes* (in baskets and pots), tuberous *Begonias*, *Plumbago capensis*, *Lilium speciosum*, *Campanula isophylla Mayi*, *Clerodendron fallax*, variegated *Funkias*, *Adiantums*, *Pterises*, *Calceolaria integrifolia*, *C. Burbidgei*, *Streptocarpuses*, *Grevillea robusta*, *Pilea muscosa*, *Cyperus alternifolius*, *Browallia demissa*, *Rhodochiton volubile* (on roof), *Cannas*, *Torrenia Fournieri*, *Datura Knighti*, *Lobelia tenuior* (a beautiful subject), *Lonicera sempervirens* (on roof), *Cheronia linoides* (coming into flower), *Celosia pyramidalis*, *Zonal Pelargonium Mrs. Robert Cannell* (flowering since June), and some early flowering *Chrysanthemums*, *Mrs. A. Willis*, *Perey's Seedling*, and

Craigmillar Park. These include many of the subjects, though not all of them.

Species of Hypericum at Kew.

The following is a selection of the showier sorts:—

HYPERICUM PATULUM has nice rounded flowers of a deep eary yellow colour. The stamens are half-an-inch long, forming a thick fringe-collar round the green ovary. It is of graceful, free growth, the leaves being glaucous beneath and dull green above.

H. ELATUM has starry flowers, like those of the Greater Celandine, and flowers July and early August. Its habit is dense and close, the shoots much-branching, and forming terminal clusters of chocolate-red capsules in great profusion; rather tender. Japan.

H. CALYCIUM, or Rose of Sharon, is known to everybody, with its dense dwarf habit and leathery dark green leaves. The large yellow flowers have long and prominent stamens. Plant in dry places. Levant.



Kingswood Show: Best six Peaches.

H. MOSERIANUM is a hybrid between the above (whose dwarf habit it follows) and *H. patulum*, its flowers being like those of the latter, but larger. It is opener and more graceful in character than the *St. John's Wort*.

H. URALUM (syn. *H. nepalense*) is very distinctive. The leaves are

all arranged exactly opposite on the slender, horizontal or oblique red stems, and are nearly all on one plane. It is a free-growing sort, and the washy-green foliage, suffused with a purple tint, helps to make it distinct. This year it has not flowered at Kew. Himalayas.

H. AUREUM is a dense grower, with close masses of bright golden flowers, the boss of stamens being prominent. The stems are whitish. North America.

H. PROLIFICUM bears thick clusters of small, not very showy, flowers. The leaves are 2in long and narrow. It grows very dense, and about 3ft high. North America.

H. KALMIANUM (sometimes confused with *densiflorum*), is an American species, is very pretty and dwarf (1½ft). Its rich yellow flowers are numerous and showy, on slender twiggy stems, the greyish leaves being thickly borne; they are linear and an inch in length. N. America.

H. ANDROSÆMUM (the Tutsan) is dwarf, 2½ft, with broad, ovate, oblong leaves, smooth and leathery. The flowers are not effective, but the clusters of nine to a dozen round crimson-red fruits are very handsome. This is very ornamental, and a good sub-shrub, found in British hedges and woodlands. The word Tutsan is a corruption from *toute saine*, the leaves formerly having been thought to heal fresh wounds. Europe.

H. DENSIFLORUM seems a straggly grower, but is showy. The twiggy growth and leaves resemble those of a *Helianthemum*.

H. HIRCINUM is one of the best, being free and vigorous. The dark leaves are irregular in outline, and inclined to turn under at the edges. The inflorescences practically embrace the whole length of a young shoot as much as 2ft. They are freely disposed, and the light yellow flowers are very showy. It attains a height of over 3ft. The variety minor is a dwarf compact grower, very neat and pretty, the foliage being light green. Europe.

H. HOOKERIANUM, from the Himalayas, has larger and nobler flowers than any other. These are as rich a colour as the yellow Water Lily (*Nuphar lutea*), and of the same shape—i.e., like a basin. They are stout of substance, and 1½in across. The neat, moderate sized leaves on short woody shoots assume a brilliant crimson colour towards autumn. This species is really a hardwooded shrub, and grows 6ft in height at Kew. A hybrid from this and *H. olympicum*, at Kew, is very dwarf, but has large flowers, with spreading petals.

H. PERFORATUM, the true St. John's Wort, grows 3½ft high, and if the leaves are held up to the light the perforations are noticeable. *H. oblongifolium* is a synonym of *H. Hookerianum*.

H. OLYMPICUM.—In this the flowers are from 1 to 2in across, being one of the large flowered kinds, though only reaching 1ft in height. The plant is not thoroughly hardy.—WANDERING WILLIE.

Gladioli from Langport.

The sunless summer does not appear to have had a detracting influence on the Gladiolus, judging from the magnificent spikes sent to us by Messrs. Kelway and Son, of Langport, Somerset. Not for years have we had such fine blooms from Kelway. The flowers are of great size, plenteous in substance, rich and pure in tone, with length and breadth in their evenly disposed inflorescences. The best varieties are:

BONA, of a clear primrose colour, the segments paling towards the tips. The lip, or lower segment, is more richly coloured, and has a maroon-purple beam down the centre.

CORONATION has large white flowers, flushed with the faintest rosy mauve. The three lower segments are charmingly blotched with bright ruby purple. The spike, however, is too open down the centre.

MRS. F. FIELD is very distinctive. The flowers are practically as large as those of *Lilium Harrisii*, the broad, thick segments being gracefully curved and turned. Regarded strictly from the florist's standard, it would fall short, but as a beautiful decorative flower for the border or the boudoir it is excellent. The colour is milk white, veined and suffused with rose.

ADMIRAL MARKHAM is a rich, glowing scarlet, lined and marked towards the edges with blackish crimson. The spike is well set, and the flowers are very stout and strong.

SERAPH is one of the brightest. Its colour is rosy crimson, almost true rose toward the centre of the blossom, the deeper colour being outwardly. The middle portions of the lower segments are primrose. The flowers are large and good.

MIKE LAMBORNE.—This is the handsomest of all. The spike is perfect, and the strong, well-formed flowers are very large. In colour it is purple-crimson, with a dash of scarlet. The purple crops out in an intensified, almost violet, form, in little daubs and flakes towards the edges of the segments.

Although the Gladiolus has never attracted enthusiastic admirers to the extent of causing them to form a National Gladiolus Society, yet every lover of flowers and gardens gives reverence to these princes of the hardy plant border. In their very stateliness and magnificence may lie the reason why they have not, years ago, captivated the hearts of floriculturists.

New Irish Industry—Pasture Seeds.

The number of industries, as a source of income, are so limited in Ireland that a new industry, or, more accurately, the revival of an old one, deserves more than passing notice. For years a number of the very poorest in this (Clonmel) and surrounding towns collected "traneen seed"—Crested Dog's-tail Grass (*Cynosurus cristatus*)—and retailed it to local agents after being threshed out, in the back streets, or on the floors of their cottages. This year large firms, such as Fennessy and Co., Waterford, employed local agents, and they advertised in "The Nationalist," with the result that not only is the collection of this seed on the farmers' pasture lands left to the poorer inhabitants of the town, but numbers of small farmers and their families collect and thresh out this seed, and retail it in Clonmel. As we write, two large railway floats, with twenty-five bags each, upwards of a ton each car, are on their way to the station with this day's produce alone. The price to-day varies from 4s. to 4s. 2d. per stone, and we saw one small farmer's wife handed £8 for forty stone of this "traneen seed." This seed is generally cut with hooks and dried in the sun, and then threshed out. The straw makes a very fine kind of plait, but here it is the seed has value, and we understand the chief demand is from Germany. The vegetation is certain, and the bite of herbage very succulent.—W. J. M. (in "The Nationalist.")

Insects as Garden Adornments.

The large family or group of the Noctue, also sometimes called "Owl Moths" or "Fat Bodies," contains about 300 British species, some of them being exceedingly plentiful. To gardeners this is an important group, for it contains a number of destructive insects, though not so many enemies of fruit as occur amongst other families smaller in their size, yet apt to be very mischievous.

But the caterpillars of Noctue chiefly feed upon the roots, crowns, and stems of plants, often concealing themselves in the day, even if their food is above the ground. The moths also appear after dark, with a few exceptions; during daylight they get amongst the herbage or into hedges, seldom reposing upon walls. When at rest the under wings are covered by the upper pair.

Dark or sombre colours prevail amongst these moths, though, when closely examined, some dull-looking specimens show very delicate markings, and there are instances of bright colours, which place some of them on the list of beautiful garden insects. Also we find a few species which have handsome caterpillars, but mostly these are rather rare.

The moths are furnished with a thick and strong proboscis, and, being partial to all sweets, they can be caught in hundreds by spreading upon trees and palings a syrup made of strong sugar or treacle. Entomologists do this to capture rarities, and gardeners might pursue the same plan to thin down the summer brood of such a pest as the Cabbage Moth, and consequently reduce the next season's caterpillars.

August and September are sure to show us the Silver Y Moth; not a night flier, but one that delights in the sunshine, when it passes rapidly from flower to flower with a hum. Its wings are a brilliant grey, marbled and mottled with brown, exhibiting the silvery mark, which has been compared to an English or Greek letter.

Its caterpillar occurs both in spring and autumn, feeding on a variety of garden plants. It is what is called, from its mode of walking, a half-looper; green, having six narrow white stripes; the true legs are reddish-brown. This caterpillar, like others of the genus, spins a whitish cocoon, fastened to some twig or stem.

Though not bred in gardens, as is *Plusia gamma*, its near relative, *P. Iota*, is a visitor to the flower beds, also it sometimes enters houses, attracted by some light. This species is called the Golden Y, but the mark is not so well defined. The brown wings are tinted with a rosy hue, and in the middle of a well defined bar are two spots of gold.

It flies in July or August, the caterpillar feeding on nettles, and various low plants during May. Still more metallie is the Burnished Brass, or *P. chrysis*. This, too, comes into garden precincts, attracted by the flowers. The upper wings are golden-green, having some brown blotches, the hind wings and body being grey. I have taken its caterpillar off nettles; it is attenuated, with a small shining head, apple-green, each segment has a decoration of six white marks. The rather scarce August moth is the Gold Spangle, *P. festuæ*, but it occurs all over England. Its wings are brown, but washed with gold, and having besides three very bright metallic spots of whitish yellow. Its caterpillar lives upon grasses.

Though we cannot regard the caterpillar of the Great Yellow-underwing (*Tryphæna pronuba*) with any friendly feeling, we must own that the moth developed from it is a fine insect, and one remarkable for its activity on the wing. Having gained access to a church, I have seen a specimen some summer evening occasion surprise, and even some alarm, as it careered about the building, now



Kingswood Show: The Epergnes.

taking a high flight, then a low one, settling for a moment, dashing about again amongst the people in the pews, till it suddenly vanished.

The fore wings of this moth are variable in colour and markings, but the hind pair are always orange yellow with a narrow black band. Its period of flight is June and July, the caterpillar feeding from the autumn right on to spring; we come upon it both in the flower and kitchen garden. Spring often brings it to view at the roots of early Lettuces. When alarmed it rolls into a compact ring. In colour it is brown, greenish, or grey, having a triple stripe down the back, and upon the sides some black lines; it is velvety, the head being small. It becomes a chrysalis in an oval cell under the earth.

So far as my observations go, the juvenile caterpillar frequently lives exposed to view on various plants, it has occurred upon Chrysanthemums; the approach of cold weather sends it into or near the ground, where plenty of food may be got.

We have also other Yellow Underwings, less common and quite as handsome, which turn up in gardens now and then; the caterpillars are not mischievous. The broad bordered species, *T. fimbria*, which is richly coloured on the fore wings, has the hind pair of dark orange, with a border of very deep black. During the day, about the middle of summer, this moth lurks in garden hedges occasionally, and if it is disturbed, flies out sharply, to hide again in another part of the hedge, so that it is not easy to capture. Its brown, mottled, velvety caterpillar is found upon Birch and Sallow; it hibernates, and is full-fed in May.

Of smaller dimensions is the Lesser Yellow Underwing, *T. robina*, not quite as showy in colour, yet a pretty insect, with the usual hind-wing adornment of orange and black. It is a common species, and visits flowers at sunset. The caterpillar eats low plants at first, afterwards it ascends various trees.

When we come to the moths that are familiarly known as the "Daggers," from a figure upon the wings of several species in the genus, we see there is a decided family likeness amongst the moths, but the caterpillars are sometimes very different in appearance. Two or three species have handsome caterpillars, which are not numerous enough, usually, to damage the shrubs or trees upon which they live.

Truly a universal insect is the Grey Dagger, or *Acronyeta Psi*, which has on the grey fore wings sundry mark-

ings of black very defined, and nearly white hind wings. This appears about June, the caterpillar in August and September; probably it escapes birds owing to the short black hairs and bristles scattered over the body. Though not a large caterpillar, it is a conspicuous one, having two humps, one on the fifth segment, the other above the tail, between them is a broad yellow stripe. Along the sides are bright red spots and tiny white warts, below these a grey hairy stripe. Fruit trees, Hawthorn, and Elm supply its food.

Quite a cockney species this, frequent in all London suburbs; and so is the Poplar Grey, *A. megacephala*—a Latin name presumably given because of the caterpillar's big head. It has a funny habit of reposing on a leaf with the body curved, the head, which has a black blotch on each cheek, and a V-mark at the back, is then made to touch the tenth segment.

The body is blackish, dotted with spots of red and white. Its cocoon is formed partly of chips of bark. The moth flies about our gardens and shrubberies on June evenings. Another Londoner is the Sycamore Dagger (*A. aceris*). Most years we notice one or more sitting upon the trunks of the trees, which the moth resembles in colour. Its caterpillar is very beautiful, the ground colour is grey or brownish, down this are snow-white spots, bordered by deep black, along the sides are pencils of orange or yellow hairs.

Some years ago I used to see that grand moth, the Crimson Underwing (*Catocala nupta*), taking its flight in the neighbourhood of Kensington, but by this time I expect the builders have driven it away, and many of the

Willows that furnished food to the caterpillar have been cut down. The species is not uncommon in Kent and other southern counties.

The fore wings of the moth are handsomely marbled, the hind wings have a black band upon crimson ground. It is an autumn insect, the caterpillar feeding about midsummer; it clings closely to the twigs, being long bodied and pale grey. Garden flowers or fruit have proved to be an attraction to that rare moth, the Clifden Nonpareil, or *C. Fraxini*. Single specimens are recorded in all parts of England. There is a story of a Scotsman who always carried with him a big pin in the hope of capturing one. At last the day came when he saw one upon the paling, but he had left the pin at home! However, he went and fetched it; fortunately the moth had not moved.—ENTOMOLOGIST.



Kingswood Show: Best six flower bunches.



Kingswood Show: Flower bunches, second prize.



Inarching Vines: A Query.

I am at present trying an experiment of inarching Muscat of Alexandria Grape upon Gros Colman variety. Can anyone who has tried the same, give me information of the result?—D. C.

Point Judging at Shrewsbury.

No doubt the details I am going to draw attention to regarding the point judging in the great Grape class at Shrewsbury will have occurred to others, and many will allow point judging still leaves something to be desired. The decision arrived at by the judges clearly shows that for cultural skill Messrs. Buchanan were leading by nine points. Taking for granted that the varieties exhibited by Mr. Goodacre were higher quality varieties, and consequently deserving higher points, yet this still deserves looking at in another light. No doubt the best Grape growers in the country were consulted regarding the framing of this class; still, they allow for the inferiority of certain varieties, and as the Messrs. Buchanan gained in seven bunches the maximum, and being in every bunch so near as only half a point off the maximum, while Mr. Goodacre only secured the maximum in one bunch, and in one case three points behind, this leaves it clear Mr. Goodacre won by quality, and not by cultural skill.

No discredit is inferred to anyone, judges or exhibitors, and I only try to show that judging by points does not give all we can desire. Cultural skill should be the first consideration. The views of others on this question would be acceptable.—W. BENBOW, Overcross, Ross-on-Wye.

Judges at Flower Shows.

I fully agree with "Judex" in his remarks on the above (page 117) in your Journal for August 6, where he says that with the exception of large shows judges' fees are not plentiful nor high enough for men to seek engagements. But good men have no need to seek engagements. This, as a secretary, I know from experience, and have found that if any committee wants to secure the best men as judges, they must fix dates of next show early and engage their men; otherwise they may be too late.

It is the men with no qualifications for judging at all who do the seeking, men who are blind to their own ignorance and overwhelmed with the ambition to appear as men of importance. These are the men, as "Judex" says, who shine better at the luncheon than at the actual judging. Of course, we know it is possible to find good practical men in high positions, who, in spite of their experience, have no adjudicating capacities at all. This being so, I think it would be doubly impossible to find a man fully qualified to adjudicate who has had no experience whatever. For a man with no practical experience at all to attempt to adjudicate at flower shows is a direct insult to the gardening profession in general, and no words too strong can be used in condemnation of the acts of such bumptious individuals, even though they may assume to be "gold medallists in horticulture." These men, through ignorance, oftentimes award prizes the wrong way about, which creates dissatisfaction amongst the exhibitors, and brings flower shows into disrepute; but I am pleased to say that during my long experience in connection with flower shows such cases seldom occur.

The rule with us is to divide the classes in the schedule into divisions, and then to appoint one or more judges for each division, being careful to select men who are experts in the growing of the things they are appointed to judge. But in the case of small shows, where the work to be done requires only one set of judges, then men with a good all-round knowledge should be selected.

I can well understand "Judex" getting on so well with his colleague, "the amiable person anxious to please everybody," for the simple reason that it would be impossible for this ignorant, but amiable person to have an opinion of his own. The latter, no doubt, is not the want of good intention, but rather the want of experience. I know of such a one who has a happy knack of quickly scanning over the exhibits, then turning round on his heels and with an air of great assurance at once says, "I

have done." He then awaits the decision of his colleague before stating what he has done; but the fact is, he has done nothing, and is simply awaiting his colleague's opinion in order that he may confirm it. At the luncheon, should they be complimented upon the soundness of the judging, "it is us"; but should any adverse comments be made by an unsuccessful exhibitor, then on the quiet he complains that it was "he, not me." After all, it is no compliment to a practical man to have his opinions confirmed by one entirely ignorant of the subject at issue.

On the other hand, it is much more than a compliment to have one's judgment endorsed by a man more practical than oneself; and as good judging contributes so much to the peace of mind of the exhibitor, and consequently to the future success of exhibitions, let us hope that this little correspondence may engender carefulness on the part of committees in the selection of judges, and that in future we shall hear no complaints as to "bogus judges or touts" having been appointed.—AN OLD HAND.

Notes on Culinary Peas.

Notwithstanding the general untoward nature of the present year, the Pea crop is very good with us here. The two later sowings, which are now coming into blossom, have, however, the appearance of likely being of no use. They seem to have been attacked, just when about a foot in height, with a disease of some kind. The leaves have yellowed upwards from the roots, and at the present time there is only about a foot of green at the top. On examining the roots I find no signs of any insects, but they are, nevertheless, quite dead, and of a blackish appearance. I do not remember ever before coming across a similar disease, if disease it is. There is not the least symptom of mildew, and before the rows were attacked they were in the most luxuriant health.

The sorts which proved excellent croppers here this year are Gradus, for which I have not enough praise; Telephone, a splendid second early; Duke of Albany, and Gladstone. Autocrat and Sharpe's Invincible are the sorts affected as above stated, and both are good in ordinary circumstances.

I sow more of Gradus each year, for its general merits deserve it. For an early crop, worthy of the name, it is the best I have yet come across, and if regulated in sowing it is possible to give a succession far on in the season. Telephone also is a sort which does remarkably well with us here, and the same may be said of the Duke of Albany. I find an occasional dressing of lime a good thing for the Pea crop, and to get the full benefit of this we never dig the lime into the soil. We spread it on hot in spring, and allow it to work its way down, which it will soon do.—D. C., Hamilton, N.B.

Grapes at Bath Show.

Mr. W. Taylor, formerly of Longleat, and more recently manager and grower for Alderman Chaffin, of Bath, has, on the occasion of the recent Bath Show demonstrated once again his unique, and, indeed, his marvellous capacity as a Grape culturist. Not only did he defeat that now famous West-country grower, Mr. Mitchell, in the principal class for Grapes (eight bunches), but in two other classes he took the lead with superb examples. The house in which they are cultivated covers but a small area (something like 26ft by 15ft if my memory serves me correctly), and when it is remembered that this small structure has been subjected to the requirements of the market grower's heavy crops for some years, it is nothing less than remarkable that in so short a space of time Grapes of the highest state of perfection have been produced. Mr. Taylor's name and fame became well established during the periods spent at Longleat, and later at Bath, and the authorship of "Vines at Longleat" helped not only to make his name familiar, but showed also the clear grasp he possessed of the most minute detail and requirement of the Grape Vine.

It is a well-known fact that Grape culture has been Mr. Taylor's great life study, and there are not a few gardeners and amateurs, particularly among Journal readers, who have benefited from advice which he so unselfishly has given from time to time. I am quite sure there are many readers who will freely acknowledge with admiring pride his latest triumph. Muscat of Alexandria, between 4lb and 5lb in weight, dense of bloom, and bright in colour, figured strongly in his exhibits. Madresfield Court, Gros Maroc, and Black Alicante were each severally shown in beautiful condition, the bloom dense, and the colour deep. There are but five Vines in the house, the oldest being about ten years planted; others have been introduced without any reconstruction of border, and their response within the past two seasons to this clever grower's methods is nothing less than phenomenal, and Mr. Marsh, the owner of the Vines, is not less proud than is their grower satisfied, with the progress made.—W. S.

NOTES

NOTICES

Royal Caledonian Horticultural Society's Show.

The secretary of the above asks us to say that the autumn exhibition held by this society takes place in Edinburgh (Waverley Market) on September 9. He adds: "I find some people inquiring where the Royal Caledonian Horticultural Society holds its autumn show" (!).

A Record Price for Kent Grown Potatoes.

Messrs. Horne and Sons, Cliffe, Rochester, have sold to a speculating buyer two tons of Northern Star for £317. The said buyer has refused £400 for them. This Potato is turning out all that is claimed for it, strong grower, abundant cropper, good quality, and free from disease. It is expected Northern Star will make £400 a ton before Christmas. There are plenty of buyers, but few sellers.

Kentish Flower Shows.

Strange though it may seem, the fair gardening county of Kent cannot boast of a single great flower show. Though it enjoys a favourable climate, is famous for its fruit, and is studded with pretentious garden establishments, no horticultural exhibition is held within the borders of the Hop county that can compare in size and excellence with those which annually take place at Hanley, York, Shrewsbury, Edinburgh, and elsewhere. Close proximity to the metropolis may, perhaps, account for this. Though attempts have been made to establish good shows in various towns, they have invariably ended in financial failure.

Gardening Appointments.

Mr. Richard Roberts, as head gardener at Mannan, Dolgelley.
* * Mr. Benbow, gardener to the Earl of Ilchester at Abbotsbury Castle Gardens, Abbotsbury, has been appointed gardener to Sir Thomas Hanbury, of La Mortola, Ventimiglia, Italy. Mr. Benbow has had experience of horticulture in the Riviera, as he was gardener for a time at Cannes, and also at the Chateau de Barla, Nice. It was this experience which qualified him for taking the position at Abbotsbury, where there is so fine a collection of sub-tropical trees, plants, and flowers. Here Eucalyptus coccifera and E. globulus have been raised from home-grown seed, the seedlings now being ten feet high. The Olive, *Olea europæa*, is established; *O. excelsa* also raised from seed. Seedling Bamboos are two feet in height. *Acacia dealbata*, raised eight years ago, are now trees flowering every year. The flowering branches are cut for decorative purposes as early as February; and *Arundinaria Simoni*, as at many places in the country, is flowering.

Mr. W. B. Latham.

A meeting of nurserymen, gardeners, and others interested in horticulture was held at the Oddfellows' Rooms, Temple Street, Birmingham, on Saturday, August 22nd, to consider the best means of recognising the many years of valuable service rendered to horticulture by Mr. W. B. Latham, who is resigning the curatorship of the Botanical Gardens, Edgbaston. At that meeting it was unanimously resolved to entertain him at a complimentary dinner, to be held at the Colonnade Hotel, New Street, Birmingham, on Thursday evening, September 24, and in the meantime to raise a fund for the purpose of presenting him with a testimonial suitable to the occasion, and such that will represent the good wishes of all lovers of horticulture in Birmingham and district. In addition to having held the curatorship for thirty-five years, he has been chairman of the Birmingham Chrysanthemum Society thirty years, the Gardeners' Association seventeen years, and the Birmingham spring flower show fifteen years, thus establishing a unique record of useful activity in the interest of horticulture. A general meeting of subscribers will be held at the Athletic Institute, John Bright Street, Birmingham, on Monday evening, September 14, at eight o'clock, to consider and decide upon the form of testimonial to be presented. —J. HUGHES, Hon. Secretary, 140, High Street, Harborne, Birmingham.

A Correction.

In the letter on the Manetti stock, from "Herefordshire Incumbent," page 194, an error occurred. Instead of "Cairo," in line 28, third paragraph, it should have read "Como."—ED.

The Gardeners' Dinner.

We are asked by Mr. A. Dean, hon. secretary of the Gardeners' Dinner Committee, to state that there is an impression abroad that young gardeners are not expected or invited to join in the party, and this notion should be abandoned. Under gardeners, as well as their chiefs, are heartily welcomed. Mr. Dean's address is 62, Richmond Road, Kingston.

"Beautiful and Rare Trees and Plants."

Messrs. George Newnes, Ltd., announce that they have in preparation for publication the above work by the Earl Annesley. There will be about seventy plates, reproductions of original photographs. The edition will be limited to three hundred copies, and subscribers will be supplied in the order of application. Specimen pages can be had on application.

British Rainfall Organisation.

The British Rainfall Organisation, founded in 1860 by the late G. J. Symons, will henceforth be carried on under the sole charge of Dr. H. R. Mill, as Mr. Sowerby Wallis has been compelled by ill health to retire after more than thirty years' connection with the association.—W. SOWERBY WALLIS, HUGH ROBERT MILL, 62, Camden Square, London, N.W.

A Case Deserving Help.

Will you permit me through your columns to solicit the support and interest of anyone who has any influence with the governors of the Royal Hospital for Incurables, Putney, on behalf of Mr. James R. Grant, a paralysed gardener, residing at Addlestone, Surrey, for the pension? This case is strongly recommended by Mr. H. Veitch, Mr. Ingram, also by Dr. Wilson, of Weybridge, and Captain G. A. Webbe. I hope to be again able to organise a concert on behalf of the Gardeners' Benevolent Institution, and would be glad of the help of anyone living within reasonable distance of Chertsey. The concert will be early in November.—A. J. BROWN, The Gardens, School of Handicrafts, Chertsey.

The London Dahlia Union.

Owing to the closing of the Royal Aquarium, Westminster, the annual grand display of Dahlias made by the Union—which comprises all the leading Dahlia raisers and cultivators of the day—will take place in the Prince's Hall of the Earl's Court Exhibition, which is near the entrance in the Warwick Road, on Wednesday and Thursday, September 16 and 17. It is during this particular week that the popular Cactus Dahlia is seen at its best, and on this occasion there will be on view not only all the finest new varieties of the present year, but several from abroad, including some very singular and interesting variations of the type of home and foreign production. As the Dahlia show will form part of the general exhibition, it is free to all who pass the gates, and the flower-loving public will have an opportunity of witnessing one of the largest exhibitions of all types of the Dahlia ever seen in London. The secretary and manager is Mr. Richard Dean, V.M.H., Ealing, London, W.

The Late William Housley.

The numerous friends of Mr. William Housley, F.R.H.S., of 28, Joshua Road, Sheffield, heard with regret of his death, which took place some days ago. Mr. Housley, who was in his fiftieth year, had been on the staff of the Sheffield General Post Office for the last thirty-two years. He was a highly respected official, being especially popular with the men under his supervision. Possessing a wide circle of friends, he was well known in the city. Apart from his official duties, Mr. Housley cultivated a taste for flowers, and was secretary of the Sheffield Chrysanthemum Society for a period of fourteen years. The success of the many shows held at the Corn Exchange and the Cutlers' Hall was in a great measure due to his energies and capable management. His successor in this post, pro tem, is Mr. M. H. Willford, of 96, Greenhow Street, Walkley, Sheffield. The interment took place in Norton Cemetery, there being a large number of mourners—late friends in various connections of his business; and the floral tributes were numerous and beautiful.

Societies.

Royal Horticultural, September 1st.

Save for some Orchids and fruit, the exhibition of the Royal Horticultural Society was submerged, and the hall was given over to Dahlias. Messrs. Williams and Son and Charlesworth and Co. had Orchid groups, while a small collection of fruit came from Lady Plowden (gardener, Mr. Clarke), Aston Rowant House, Oxon. The Peaches, Nectarines, Gages, and Lemons were exceedingly fine.

A cultural commendation was awarded to Mr. Howe, gardener to Lady Tate, of Park Hill, Streatham Common, for twenty-eight Brown Turkey Figs (second crop).

Messrs. W. Wells and Co., Ltd., Redhill, displayed a small but interesting exhibit of early flowering Chrysanthemums, which included nice clusters of Carrie, Blush Beauty, Goacher's Crimson, Gertie, The Champion (a fine yellow), Champ de Neige, Pearl, and Polly. The blooms were mostly exhibited in both forms, naturally and disbudded, thus enabling the public to form a fair estimate of their merits.

From Messrs. Jas. Veitch and Sons, Ltd., came a most interesting exhibit of Vitis (species from Central China), which were represented by *V. armata*, *V. Romaneti*, *V. Aconitifolia*, *V. flexuosa* Wilsoni, *V. megaphylla*, and *V. Thomsoni*; also a fine basket of *Buddleia variabilis* var. *Veitchiana* and a nice basket of *Lilium auratum* var. *Tashiori*.

Hobbies, Ltd., staged some cross-bred Fuchsias, *H. Henkell* (triphylla x corymbosa), &c.; also *Iris pallida* fol. var. And various small exhibits were set up by others for certificates.

Certificates and Awards of Merit.

Tamarix hispida aestivalis (R. Veitch and Son, Exeter).—This is seemingly an upright growing kind, with mauve-purple inflorescences, heavier than in the type. A.M.

Chrysanthemum maximum King Edward (W. Angus, Penicuik, N.B.).—A large flowered form, 6in across, very pure white. A.M.

Cattleya x *Pittiana*, Wilson-Potter's var. (J. Wilson-Potter, Esq.).—Parents: *C. aurea* x *C. granulosa* Schofieldiana. The wavy petals are tawny brown, with reddish flush. The lip broadens in front, and is rich mauve-purple. F.C.C.

Hidalgua Wercklei (No name).—This "Climbing Dahlia" is now well-known, and was figured by us in 1901. It has orange-scarlet flowers, but does not blossom freely. It is a rampant, sappy grower, and requires a greenhouse. A.M.

Chrysanthemum The Champion (Wells and Co.).—This is a very early-flowering, open-air, market variety, rich deep canary yellow, with plenteous clusters. A.M.

National Dahlia, September 1st and 2nd.

The exhibition held by the Dahlia Society was good on the whole, and the whole of the James Street Drill Hall at Westminster was filled. A number of varieties were certificated, but it is doubtful if more than three or four were worthy of the distinction.

The staging of the flowers in very many of the amateurs' classes was remarkable for its slovenliness, and Dahlia growers do not seem to possess much artistic capability. If Mr. Tulloch's example were followed, the standard of excellence in appearance would be raised one hundredfold. Nevertheless, next year and the year after we shall most likely have the same complaint to make. And why should this continue?

Nurserymen.

The premier class for Show and Fancy Dahlias was for forty-eight distinct varieties. As a rule this class is keenly contested, and on this occasion there were three exhibitors. The general quality of the exhibits was well up to the average, the blue ribbon going to Messrs. Keynes, Williams and Co., of Salisbury. The varieties were—back row: Henry Walton, Royal Queen, Buttercup, Norma, George Sangers, Peacock, Duchess of Albany, Emin Pasha, Gaiety, J. T. West, S. Mortimer, Rev. J. B. M. Camm, Wm. Rawlings, Chieftain, Lauretta, Purvis, and W. Glasscock. Second row: Mrs. Every, Gold Medal, Gloire de Lyon, Henry Clark, J. M. Keynes, Goldsmith, Arthur Rawlings, Duchess of York, Mr. Chamberlain, Harry Keith, John Hickling, J. Cocker, Gracchus, R. T. Rawlings, Mrs. Langtry, Florence Tranter, Wm. Keith, Watchman, David Johnston, Warrior, Mrs. McKenzie, John Walker, Henrietta, Rebecca, Mrs. Saunders, Matt. Campbell, R. Dean, Dr. Keynes, Virginal, T. Hobbs, Dorothy, and H. Bond.

Mr. Charles Turner, Slough, was a capital second, his best flowers being Mr. C. Noyes, W. Garrett, Glowworm, Colonist, Mrs. Morgan, Maud Fellowes, Dorothy, Gracchus, Mrs. Gladstone, John Walker, W. Keith, and Arthur Rawlings. Mr. S. Mortimer was a good third. A few of his best flowers were Mrs. Gladstone, Mrs. Mortimer, Harrison Weir, Crimson Globe, and Earl of Ravenswood.

For thirty-six distinct blooms there were four entries, the

first position being awarded to Mr. W. Treseder, Cardiff, for a nice level exhibit, but the exhibitor could not be congratulated on his method of labelling. The varieties were; John Walker, Henry Walton, Colonist, Comedian (self), T. J. Saltmarsh, Comedian, John Hickling, Goldsmith, Major Bartelot, Duchess of York, Prince Bismarck, Prince Henry, Mrs. Saunders, T. S. Ware, Mrs. G. R. Jeffard, Eclipse, Arthur Ocock, Mrs. Langtry, W. Garratt, Marjorie, Purple Prince, Virginal, Duchess of Albany, Arthur Rawlings, Matt. Campbell, Mrs. Dodds, Sunset, Mrs. D. Saunders, Goldfinder, Shottesham Hero, Diadem, Mrs. W. Slack, Duke of Fife, Chieftain, Prince of Denmark, and Mrs. Gladstone.

Mr. S. Mortimer was second with good blooms of Virginal, Duchess of Albany, Grand Sultan, Jas. Cocker, R. T. Rawlings, Dazzler, and John Walker; while Mr. J. Walker, Thame, brought up the rear in good style.

In division B, twenty-four blooms distinct were asked for, and three exhibitors responded, Mrs. M. V. Seale, Vine Nursery, Sevenoaks, winning first prize. Messrs. J. Cray and Sons, Frome, were a neat second; Mr. G. Humphreys, Chippenham, third.

The smaller class for eighteen blooms brought out three entrants, Mr. Geo. Humphries leading. The competition, however, was keen between the first and second places. Messrs. J. Cray and Sons, Frome, were second with R. T. Rawlings, Mrs. Saunders, Mrs. F. Forman, Colonist, and T. S. Ware as their best flowers. Mrs. M. V. Seale third.

In the twelve distinct varieties (division C) there were only two entries. Here Mr. J. R. Tranter, Henley-on-Thames, proved the victor, and Messrs. J. Cheal and Sons, Crawley, were a capital second.

CACTUS DAHLIAS.—Additional interest was added to the large class for Cactus Dahlias (eighteen varieties in bunches of six blooms each) by the Challenge Cup, now offered for the first time. Needless to say, the competition was keen, and the cream of varieties were on view. There were four competitors who made a brave show, but Messrs. Jas. Stredwick and Sons, St. Leonards, were placed first, having a stand rich in lilacs and pinks. The varieties were: Reliance, Diadem, Magnificent, Oliver Twist, Falcon, Osprey, Mrs. J. W. Wilkinson, Mrs. Winstanley, Amelia Roberts, Rainbow, Ivanhoe, Columbia, Sirius, Pearl, Merlin, Comet, Florence M. Stredwick, and Ella Kraemar. Messrs. J. Burrell and Co., Cambridge, must have run the first prizewinner very hard, for there was little to choose between them. In this exhibit the blooms were all of the refined type, a few of the best being W. J. Gallon, Premier, Albion, Violette, Conrad, Romance, J. H. Jackson, Ianthe, and Ella. Messrs. J. Cheal and Sons were an excellent third.

A class for twelve varieties of six blooms each brought out a strong force of four exhibits. Mr. J. Walker proved the victor with a strong set. The varieties were: Phineas, Mrs. Ed. Mawley, R. Dean, Ianthe, Mrs. H. J. Jones, J. Weir Fife, Lord Roberts, Raymond Parks, Crimson Gem, Eva, Uncle Tom, and Alpha. Mr. S. Mortimer was second with a well staged exhibit, the best bunches being Winsome, Mrs. W. Cuthbertson, Gabriel, Eva, Mrs. Carter Page, and Lyric. Mr. C. Turner was third.

For forty-eight blooms (class 8) arranged in the orthodox fashion on boards, there were four competitors. Here Messrs. J. Burrell and Co. were placed first, the varieties employed being nearly all seedlings raised at Cambridge. They were Trojan, Albatross, J. H. Jackson, Ianthe, Premier, J. Harrison, Albion, J. W. Wilkinson, Mrs. E. Mawley, Conrad, Fairy, Ajax, Maurice, Phineas, W. J. Gallow, Romance, Ella, Zoe, Ambrosia, Britannia, Decima, Sylvia, Rupert, Amabel, Minnie West, Chameleon, Gilbert, Enchantress, Timona, Mrs. de Lucca, Epopee, Ida, Olga, Lyric, Gazelle, Alicia, Cerasus, Vesta, Florence H. F. Robertson, Galliard, Rosine, Lauretta, Raymond, Blanche, Curio, and Dulcis. Messrs. Keynes, Williams, and Co. were second, having good typical blooms; while Messrs. J. Stredwick and Son were third with blooms undeveloped, or they would have pointed higher.

A smaller class for twenty-four blooms allowed the smaller exhibitors a chance of competing, and they responded well with eight entries. Mr. W. Baxter, Woking, secured the first prize; Mr. Mortimer was second; and Mr. W. Treseder brought up the rear.

Class 10 was for a decorative exhibit, with twelve varieties, six blooms each, arranged in vases with any suitable foliage, grasses, or berries. The stems could be stiffened by wires. The quality of the flowers being the leading feature. Here there were three exhibitors, Messrs. J. Cheal and Sons scoring with an exhibit arranged with grasses, *Prunus pissardi*, and a few berries. Mr. M. V. Seale came second, using foliage liberally, in fact, too liberally; while Messrs. Keynes, Williams and Co. were a good third.

POMPON DAHLIAS.—The largest class for pompons was that for twenty-four varieties of ten blooms each, and was represented by three exhibitors. The first prize was awarded to Mr. Chas. Turner for a perfect display, the colours being well balanced, and the individual bunches all that could be desired. The varie-

tics were Bacchus, Orpheus, Silvia, Distinction, Sunny Daybreak, Lorama, Daisy, Snowflake, Queen of Whites, Douglas, Hesperia, Ganymede, Nellie Broomhead, Emily Hopper, Cyril, Romulus, Darkest of All, Nerissa, Adelaide, Mignon, Hypatia, Malcolm, San Toy, and Jessica. Messrs. J. Cheal and Sons were second with nice bunches of Madeleine, Mephisto, Little Bugler, Iona, Commodore, and Cyril; while the third place was taken by Mrs. M. V. Seale with a bright exhibit.

Seale, Miss Roberts, Ferito, Madge, Formosa, Beauty's Eye, Naomi Tighe, Miss Morland, Victoria, Eric, Robin Adair, Columbine, Royal Sovereign, Polly Eccles, Snowdrop, and Wm. Parrott. Mrs. M. V. Seale was a good second.

For twelve bunches of ten blooms each there were three exhibitors, Mr. J. Walker being awarded first prize for a well displayed exhibit. Messrs. J. Cray and Sons were second, and Mr. Geo. Humphreys third.



A Floral Arrangement. (See page 214.)

A class was provided for twelve bunches, with a similar number of flowers. Here there were three entries, Messrs. J. Cray and Sons, Frome, being first; Mr. J. Walker second; and Mr. Geo. Humphreys third.

SINGLE DAHLIAS.—The single section was represented by two classes, the premier for twenty-four varieties of ten blooms each brought two exhibits. Messrs. Jas. Cheal and Sons were placed first with a model display, though without a bunch of a pure white. The varieties employed were Amos Perry, Tommy, Vesuvius, Hilda, Meta, Demon, Aurora, Miss Girdlestone, Leslie

Amateurs.

CLASS 15.—The Silver Challenge Cup for two dozen Show and Fancy Dahlias (or intermixed) was captured by Mr. Thos. Anstiss, of Brill, Bucks, with flowers of very moderate size, but as perfect in form and purity as could possibly be; all were good, and comprised William Powell, Daniel Cornish, Jno. Walker, Sarah Mortimer, Duchess of Albany, D. Johnson, Chieftain, Mrs. W. Slack, Mrs. D. Saunders, Florrie Tranter, Mrs. J. Forman, J. T. West, W. Rawlings, Marjorie, Purple Prince, R. T. Rawlings, Mrs. Langtry, Mrs. Gladstone, T. Anstiss, Dr. Keynes, and

Hercules. Mr. J. Pilling, Gibraltar Cross, Gee House, Hyde, came second with a poorly staged set, and very uneven; third, Mr. W. Peters, Holmhurst Lodge, St. Leonards.

For the eighteen ditto, Mr. A. Parkes, of Ightham Mote, Ivy Hatch, Sevenoaks, led the way, having some good Fancies, and altogether a fair selection of fine flowers. Mr. S. Cooper, The Hamlet, Chippenham, Wilts, must have been a close follower; and third, Mr. E. T. Matthews, 42, Almond Street, Derby.

SHOW DAHLIAS ONLY.—Mr. J. Newman, Bell Inn, Kingswood, Bristol, beat J. Cousins, May Cottage, Greenway Lane, Chippenham, only the two showing, and each being good for the twelve blooms. For the six of this section, the winners were Mr. Geo. Hood, Langley Buwell, Chippenham, with excellent flowers; second, Mr. F. Grinstead, Beaufort Park, Battle, also with fine blooms; and third, Mr. J. Britton, Hackney Training Schools, Brentwood.

FANCY VARIETIES.—For the twelve, we found Mr. S. Cooper again in the forefront, winning the special prize presented by the Duchess of Sutherland. Second came Mr. Thos. Anstiss, with a weak set; and the third was disqualified owing to his having some Show varieties. For six Fancies, Mr. J. Newman led against Mr. J. Cousins; and third, Mr. A. Parkes, each with grand samples.

CACTUS DAHLIAS.—In class 21, for the six varieties, six flowers of each, a very handsome display was made by Mr. E. Turner, of The Vicarage, Hippington, Sevenoaks, yet there was room for still more effect. This seemed to be the only entry, yet the class might have been one of the most interesting in the show.

The Silver Challenge Cup, for nine varieties, in bunches of three, brought forward six competitors, and Mr. Percy Tulloch, of Sterndale, New Church Road, Hove, romped in first. It is remarkable that year after year we find such slovenly setting up of flowers. Mr. Tulloch was exemplary in this respect, as he always is, but his opponents here were simply disgraceful, some of them showing in vases with the labels of the Carnation Society still pasted to them! Come, let us advance. Mr. W. Peters was second, and Mr. Quinland, of East Grinstead, third.

The class for six varieties, in trebles, enticed eight entries, some of them very good. Mr. H. Brown, of North Street, Luton, had a very smart exhibit for first, having amongst others, Up-to-Date (a graceful rose-carmine). Mr. Grinstead was second, and Mr. E. Mawley, the President, third. Mr. Mawley might have staged his more tastefully; a little moss beneath would have helped. Messrs. Keynes, Williams and Co., and Cheal and Sons, gave the second and third prizes.

For Messrs. Dobbie and Co.'s gold badge, and Cheal and Sons' money award, Mr. H. A. Needs, of Heath View, Horsell, made the best show, and thus led. He staged fine, sweet, graceful flowers, all even and good, above a showy black stand. The names were printed and fixed with elastic—neat and convenient. His best were Mrs. Carter Page, Mabel Tulloch, Mrs. E. Mawley, and Floradora. Mr. J. Bryant, of St. Martin's, Salisbury, was second, and Mr. J. Shoebridge, St. Margaret's, East Grinstead, came next, out of seven. Mr. Mortimer gave the prizes.

Mr. H. Brown was first for the twelve; E. T. Matthews second; and G. Quinland third. For the six do. (Cheal's prizes), the lead was with Mr. N. Leckyer, of Greenhill Park, New Barnet; second and third being A. Brown, of Luton; and A. Parkes, of Sevenoaks.

POMPON DAHLIAS.—These made a fair show. For the twelve in bunches of six, Mr. H. Brown had a grand lot, and was first; Mr. J. F. Hudson, of Acton, came second; Mr. W. C. Pagram, The Whin Gardens, Weybridge, third. For six ditto, Mr. A. Brown was foremost, being followed by F. Gazeley, North Street, Luton; and third, Mr. J. Britton, Brentwood.

SINGLE DAHLIAS.—For six bunches of ten flowers each, Mr. J. F. Hudson was placed first; Mr. Mawley, with a well-staged lot, came next; and third, Mr. W. Peters. For six varieties, six of each, the Rev. S. Spencer Pearce, of Combe Vicarage, Woodstock, Oxon, was the only exhibitor. For the dozen sorts, arranged in vases for effect with foliage, only two entrants were brave or artistic enough to come forward. The first prize was well won by Mr. J. F. Hudson, who used *Kochia scoparia* shoots, Maple twigs, *Ampelopsis*, *Adiantums*, and *Asparagus plumosus*. The colour contrasts were excellent, and as glasses were used, the effect was light and graceful. Mr. Mawley was second. This class should be very greatly developed; this is using the flower, as well as exhibiting it.

DECORATIVE CLASSES.—The baskets of Dahlia blooms arranged with appropriate foliage were not particularly striking. The first prize fell to Mr. H. A. Needs, who used yellow and bronze flowers, with *Prunus pissardi* and *Asparagus*. Mr. R. Edwards, Beachy Lees, Sevenoaks, was second, and Mr. A. Parkes, third.

There were six competitors for a vase of Dahlias, Mr. H. A. Needs being first; Mr. P. Tulloch second, Mr. F. G. Oliver third.

For three vases of Cactus Dahlias, six blooms in each, with suitable foliage, no less than five entries were staged. Mr. P. Tulloch was first with five vases of Lucifer, Mrs. Ed. Mawley, and Mrs. Carter Page. Mr. Ed. Mawley made a good second, and Mr. R. Edwards third.

Classes 35, 36, and 37 were staged by novices. For six Show or Fancy Dahlias there were six entries. Mr. John Newman, Bell Inn, Kingswood, Bristol, winning first prize. Mr. Geo. Hood, Langley Burrell, Chippenham, followed with four good flowers, while Mr. E. F. Matthews was third.

For six Cactus varieties Mr. F. Grinstead, of Battle, led; Mr. J. Button, Brentwood, second; and Mr. F. Gazeley, Luton, third.

Open Classes.

THE OPEN DECORATIVE CLASSES were not quite so strong as usual as far as entries were concerned, though the quality was well maintained. For a shower bouquet there were three entries, Mr. W. Treseder winning easily with an arrangement of white and bi-coloured flowers. Mrs. M. V. Seale being second with a bouquet of yellow and bronze, while the third place fell to "Rimberley," Kenilworth, for a heavy affair.

The decorative baskets only brought out three exhibits, Mrs. M. V. Seale winning with a display arranged with berries and foliage. The blooms consisted of such varieties as Richard Dean, Floradora, and so on. Mr. W. Treseder came a good second, using bi-coloured flowers most effectively.

The competition for a vase of pompon varieties (class 40), arranged with appropriate foliage brought out six entries. Mr. W. C. Pagram, The Whin Gardens, Weybridge, winning handsomely; Mrs. M. V. Seale being placed second, and "Rimberleys" third.

The class for six bunches of Fancy single Dahlias, six blooms to make a bunch, brought out four exhibits. The first prize was won by Mr. J. H. Hudson, Acton, who staged a charming exhibit, the varieties employed being Tommy, Victoria, Dearest, Madge, Louisette, and Girlie. Mr. J. Walker came next, and Mrs. M. V. Seale brought up the rear.

Seedlings.—The following Dahlias received F.C.C.'s.

Princess of Wales (J. Cheal and Sons).—A single variety, rosy lilac with an orange disc.

Mrs. J. W. Wilkinson (Messrs. J. Stredwick and Son).—A true Cactus, deep rosy pink, excellent in form.

Florence M. Stredwick (Stredwick).—A good white Cactus that fails at the base of the florets.

Pearl (Stredwick).—A grand Cactus variety, rosy pink, with a silvery tip to each petal; quite the best novelty exhibited.

Mrs. H. L. Brousson (Stredwick).—A true Cactus, with refined petals, buff in colour, evidently a seedling from Magnificent.

Sirius.—A Fancy Cactus, coloured crimson, overlying gold. (Stredwick).

H. W. Sillem.—A good heavy exhibition flower, but hangs its head too much; rich crimson, with refined petals. (H. Shoesmith, Woking).

Pompon Queen of the Whites (Chas. Turner).—White, a good form.

Pompon Edina.—A pretty rich yellow, with reddish centre.

Non-competitive Exhibits.

Hobbies, Ltd., Dereham, as one would expect, were largely and well represented. We name a few of their best. *Ida*, *Minnie West*, *Yellow Gem*, *H. J. Jones*, and *H. F. Robertson*, each shades of yellow; *Mrs. Amos Perry*, *Ella*, *Ibis*, *Shamrock*, and *Raymond Parks*, as crimson and allied shades; *Alpha* (a Fancy), *Mabel Tulloch*, rosy; *Lord Roberts*, milk-white; *Mrs. Seagrave*, ruby crimson-purple; also *Dainty*, *Etna*, and *Winsome*.

Messrs. T. S. Ware (1902), Ltd., from Feltham, had their blooms arranged in flat, even lines. *Sandpiper* is very brilliant; *Winsome*, a good white; *Ida*, yellow; *Loogali*, a rich golden crimson; *J. W. Wilkinson*, as good as ever; also *Galliard* and *Baden Powell*. Capt. Broad must be a grand decorative garden variety, intenser and richer than the old Show, *Glare of the Garden*. We should like to see a mass of this.

Messrs. Cutbush and Son, Barnet, Herts, had a tasty group and well set up. The older favourites, as well as the novelties, were here. We believe Messrs. Cutbush grow as many as 10,000 annually for the supply of their customers, and they are likely to come right to the front in this department.

Messrs. H. Cannell and Sons, Swanley, contributed a large and varied display of Dahlias, arranged in sprays, with breaks of the beautiful foliage plant *Kochia scoparia*; while the common *Bracken* and *Gypsophila* were used effectively. The Cactus varieties constituted the leading feature, and the most noteworthy varieties were *Mrs. F. A. Perkins*, *Mrs. Winstanley*, *Progenitor*, *Mrs. Carter Page*, *Mr. Amos Perry*, *Gabriel*, *Florence*, *R. J. Hamill*, *Columbia*, and *J. W. Wilkinson*. The firm also displayed *President Viger* and a few Continental monstrosities such as *Le Colosse*, *Souvenir de Gustave Douzon*, and *Madame Van den Dael*.

Bath Floral Fête, August 26th and 27th.

The promoters of this fine and popular autumn show congratulated themselves on the choice of a fine morning for the opening of their exhibition, but the elements dealt, as they so often do at Bath, a severe and damaging reverse just at a critical moment. The second day, too, proved disastrously wet in the afternoon, so that the gate receipts for the two days must have been lamentably short of their average.

The show itself was of all-round excellence; in some instances

it was surprisingly good. Roses, herbaceous flowers, fruit, Fuchsias, and table decorations in particular. The class which provided for twelve ornamental and flowering plants found Messrs. Cypher and Sons, as usual, easy winners, though we have seen finer plants on some previous occasions from the Cheltenham Nurseries. *Codiaeum angustifolia*, *C. Thompsoni*, Countess, Evansianus, and Gloriosa, the latter a pale lemon yellow-leaved kind, were very good, though of smaller size in plant to what is usually staged by Messrs. Cypher. Palms were fine, so also were the flowering plants, and *Bougainvillea glabra* in particular. Mr. G. Hallet, Bath, was second with much smaller specimens.

Messrs. Cypher won with single specimens of flowering and foliage; and with six ornamental foliage Messrs. Cole and Son were a good first. Groups are always a notable feature of the Bath shows. Messrs. Cypher, on this occasion, maintained their position with a beautiful exhibit arranged in their well-known style. Messrs. Cole and Son were defeated by Mr. R. B. Cater's clever gardener for second prize, with a most commendable arrangement, though the discriminating tax imposed on the judges must have been a severe one, so uniform were individual merit, both in style of arrangement and quality of plant.

Fuchsias, despite the trying season, were in beautiful condition, so free of flower, rich in variety, and perfectly modelled. Perfect pyramids, from eight to ten feet in height, clothed from their points to the pots with healthy foliage and flower, were staged in goodly numbers. With nine specimens, Mr. Parratt, gardener to H. W. Tugwell, Esq., Bath, won with such varieties as Clipper, Tucker's Rival, Western Beauty, Final, Masterpiece, Doel's Favourite, and Jubilee Queen. Mr. Chislett, gardener to E. T. D. Foxcroft, Esq., Hinton Charterhouse, was an exceedingly close second, Mrs. Bright, Arabella, Amy Lye, and Brilliant being some of the most striking varieties shown. Mr. H. Pocock, Hilpert, staged the best six with unnamed plants, Messrs. G. Tucker and J. H. Willcox following. Messrs. Parrot and Chislett won respectively with dark and light-coloured single specimens.

With six stove or greenhouse plants in bloom, Mr. Tucker staged well-trained, freely-bloomed plants of *Ixora Fraseri*, *Dipladenia Brearleyana*, *Bougainvillea Cypheri*, *Allamanda nobilis*, and *Statice Gilberti*. In Mr. Chislett's second prize lot occurred a beautiful *Clerodendron Balfourii*. Messrs. Cypher won with *Ixora Duffi* as a single specimen; Mr. Tucker with *Stephanotis*, was a good second. Messrs. Stokes and Son led with twelve Ferns, and Mr. G. Tucker staged a beautiful half-dozen, the same growers winning also with single specimen Ferns. Geraniums, Gloxinias, Coxcombs, Petunias, Orchids in six varieties, Coleus, Begonias, were all capitally represented.

Cut flowers in their many kinds, taking the weather into account, were really marvellous. Roses were superb in colour and size. Messrs. Perkins and Son, Coventry, and Mr. John Mattock, had the best twenty-four singles; Mr. Crossling, Cardiff, the best twelve; and in the class for twelve varieties shown, five in each vase, their exhibit was simply perfect. Messrs. Perkins' exhibit lost much by the indifferent style of staging. Mr. J. Mattock was a good third. Mr. Alex. Hill Gray, Bath, had the best Teas; Dahlias were very good; Pompons, Cactus, singles, Show and Fancy, were all splendid. The Cactus, single, and Pompon, however, far excel as an exhibition flower. Messrs. Cray were again successful. Mr. Tickle, gardener to T. Carr, Esq., Twerton, excelled with singles, beautiful in flower, colour, and arrangement. Messrs. W. D. Porter, Bath, and R. B. Cater's Zonal Pelargoniums in twenty-four bunches, made a most interesting and bright display, individual trusses and pips being so good. Asters were fine and numerous. Zinnias and Marigolds bright, as also were annuals, cut Gloxinias, and stove and greenhouse flowers.

Hardy perennials created the greatest interest, a great bank of varied colours, many feet in length, was the admiration of everyone. Messrs. Stokes and Son excelled more by variety than by individual quality, though all were high-class and some were both rare and choice. Messrs. W. D. Porter and Walters and Son were equally deserving competitors.

Decorated dinner-tables brought together no less than ten rivals, out of whom but three won a prize. Mrs. Waller, Westbury-on-Trym, had a delightful blend of soft coloured Orchids and other flowers; Mrs. Colston Hale, with bronze and pale Orchids, secured second; and Mrs. G. F. Butcher third. Mrs. Hale, for a beautifully-dressed vase, was first in that class, and second for a vase of wild flowers.

The fruit tent was unusually well filled, Grapes and Apples in particular being both numerous and of fine quality. A class for eight bunches found Mr. W. Taylor, grower to Mr. Marsh, Bath, a good winner, his Muscats being the finest coloured Grapes we have seen this year. Besides these were Gros Maroc, Black Hamburgh, and Alicante.

Mr. Mitchell, gardener to J. W. Fleming, Esq., Romsey, had to be content with second prize, a defeat he has not suffered for some time before. His Gros Marocs were specially fine in every respect, his Muscats heavy in bunch, and Madresfield and Black Hamburgh well coloured. Mr. Strugnell was third.

Muscats of Alexandria again found a winner in Mr. Taylor, his clusters being very large and the colour, for the year, wonder-

fully bright. Mr. Mitchell, with heavy bunches, came second, and A. R. Baily, Esq., Frome (gardener, Mr. Taylor), third. There were other exhibits in this finely-filled class.

With Black Hamburghs, Mr. J. Ayers, gardener to J. F. Hall, Esq., Wells, won from Mr. Mitchell with jet black bunches, though not so heavy or so well finished as the Romsey Grapes, as there was a marked deficiency of bloom. The class for any other black was a good one, Mr. Marsh's grower, Mr. W. Taylor, again excelling with well-finished examples of Gros Maroc, Messrs. Mitchell and Jefferies following.

Four competed with a collection of eight dishes of fruit, Mr. Mitchell staging handsome Gros Maroc, and Muscat Grapes, Best of All Melon, Pine Apple Nectarines, Dymond Peaches, Bruiswick Figs and Apples. Mr. H. Jones, Bath, was second, and Mr. Strugnell third.

Mr. Mitchell took the leading cards with Peaches and Nectarines, both fine in colour and size; and Mr. Wilkinson, Tyntesfield, secured both prizes for Melons in the open classes, with finely-flavoured fruits.

Apples, both cooking and dessert, made a wonderful show, and must have nonplussed not a few who regard the season as a blank in an Apple sense. With three dishes of dessert, Messrs. W. Fisher, Batheaston, and J. Ayres, Wells, staged beautifully coloured specimens, Lady Sudeley being particularly bright. Mr. F. Wait, Bath, won from Messrs. Somerville and Fisher with a single dish. Culinary sorts were in strong force. Mr. Ayres staged for first prize Gascoyne's, Warner's and Peasgood's excellently. Pott's Seedling, in Mr. Wait's second prize lot, was also a fine dish. Peasgood's Nonsuch, as usual, led for a single dish, Mr. H. H. Hill, Wells, having a very fine dozen. Warner's King also was shown well by Mr. Hall, Bath.

Plums, like Apples, were fine; so, too, were Filberts; and Pears could not fail to have interested or made envious those who have so many barren trees at home.

As at most other shows, vegetables were of fine quality, though at Bath the schedule does not provide for much extent in variety. Mr. W. D. Porter, Batheaston, won with the collection of twelve dishes; Messrs. Stokes and Son, Potatoes; Mr. Vilven, twelve Tomatoes and a fine basket of salad; Messrs. Cray and Sons, Frome, Cucumbers and yellow Tomatoes. For Messrs. Webb and Sons' prizes for a collection, four competed, Mr. L. Amos and Captain Gillings' gardener being the most successful.

Non-competitive exhibits comprised a splendid assortment of single and double Begonias from Messrs. Blackmore and Langdon, Twerton; a large collection of flowering and foliage plants from Messrs. Garaway and Co., Clifton; a fine assortment of Zonal and Ivy-leaved Pelargoniums from Mr. Vincent Slade, Taunton; Roses from Messrs. Cooling, Bath; and six baskets of nicely selected market Tomatoes from Mr. Vilven, Bathford Nurseries, Bath. The varieties were Up-to-Date, Holmes' Supreme, Cropper, Lister's Prolific, Dyer's Seedling, and Vilven's Selected.

Dundee Horticultural, August 27th.

The annual exhibition of this, one of the most popular horticultural societies in Scotland, lasted for three days. Favoured with fine weather, the exhibition was a great success, both as regards the show itself and from the financial point of view, the number of visitors having exceeded all previous records. The exhibition filled three large marquees, which were most effectively arranged, and presented a most attractive appearance. The number of entries in the various classes exceeded 2,000, a very large number, considering that the competitors nearly all come from the district round Dundee.

The most imposing section in the exhibition were the pot plants, which were not only numerous, but generally of a quality that would not have needed to blush at any of the largest shows in the kingdom. The leading prize was for a display arranged for effect on a table 16ft by 8ft, cut flowers and cut foliage admissible. The only competitor was Mr. James Beats, gardener, Binrock, Dundee, who put up a showy, elegantly arranged, and highly attractive exhibit, containing well coloured Crotons, *Draenas*, variegated *Eulalia*, &c., interspersed with vases of *Chrysanthemums*, *Cannas*, *Liliums*, &c.

For a table of plants 9ft by 5ft Mr. Meston, gardener to R. B. Don, Esq., gained the premier award with a most pleasing arrangement of the plants usually seen in such exhibits, all nicely grown, and the foliage plants bright and healthy.

In the classes for specimen plants there was much better competition, the prizes being largely gained by Mr. R. W. Saunders and his brother, Mr. David Saunders, both well-known plant growers near Dundee. The class for six stove and greenhouse plants was most keenly competed for, and the specimens shown very excellent. In Mr. R. W. Saunders' first prize lot *Ixora speciosa*, *Statice profusa*, and a magnificent Palm (*Arca lutescens*) were specially noticeable. Mr. George Scott, gardener, Leathwood, was also a prominent exhibitor, his plants of early *Chrysanthemums*, *Liliums*, and *Pelargoniums* being very good. Mr. James Bethel, Westwood, Newport, was to the front

with British Ferns and Alpine plants, which were both well grown and of great interest. The

Cut Flower Section.

drew a very large and keen competition, while the quality generally speaking was such as to demand a great deal of close scrutiny. Sweet Peas in vases were a prominent feature, and the prize lots were of most excellent quality. Mr. Fairweather, gardener to Lord Provost Barrie, scored a distinct success for twelve varieties. Mr. Green was second, and Mr. Bethel third for good lots. Mr. D. Saunders was first for twelve bunches of stove and greenhouse flowers with a most attractive exhibit. Cactus Dahlias, Roses, Carnations, Begonias, Gladioli, Pelargoniums, and Asters were all good for the season, but space prevents detailed criticism.

In the floral decoration section there was a capital display of bouquets, both in the open and gardeners' classes, which were mostly very meritorious, showing marked improvement on recent years. In the open class Messrs. Perkins, of Coventry, who had travelled far for such moderate prizes, as might be expected, carried off the first prizes in the two classes with bouquets characteristic of their elegant, beautifully finished style, and rich selection of flowers. They were also first for a wreath, with a most elegant example of their charming floral work. With sprays and buttonholes they also led.

In the open class for bouquets Mr. Beatts, gardener, Binrock, was a very creditable second, and was first in the gardeners' class. Mr. Beatts was also second for wreath, with one that was much admired, though not quite up to the standard of work in that of Messrs. Perkins. This section attracted very great attention from visitors.

In classes for cut flowers for nurserymen, Messrs. D. and W. Croll, Dundee, were first for twenty-four blooms Roses, and also for twenty-four Tea and Noisette Roses, Messrs. Adam and Craigmile, Aberdeen, being second in both cases. For eighteen bunches hardy border flowers Mr. Wm. Farquharson was first with a good exhibit.

Fruit and Vegetables.

This section was not quite up to some former years, but contained some very excellent exhibits. The leading prize of the show was for a decorative dessert table, 9ft by 4½ft, for not more than sixteen dishes of fruit with floral decorations. There were two competitors, who showed most creditably. The first prize was awarded to Mr. James Beisant, gardener, Castle Huntly, with fourteen dishes, including four bunches of very excellent Grapes, good Muscat of Alexandria (two), Muscat Hamburgh, and Madresfield Court; also good Peaches, Nectarines, Melons, Apples, Pears, and Figs. The floral decorations were Sweet Peas for centre epergne and glasses of Malmaison Carnations. The effect was rich, but slightly heavy. The judges awarded 93 points, 78 for fruit, and 15 for decorations. Second prize was awarded to Mr. Richard Cairns, gardener, Balruddery, a well-known Grape grower. The Grapes here were similar sorts, but if anything rather better than in the first collection. The decoration was elegant, but rather commonplace—Poppies and Grasses, with Asparagus. This was awarded 89½ points, viz., 78½ for fruit and 11 for floral arrangement.

For a collection of hardy fruit Mr. Ross, Braco Castle, was first with middling specimens. For four bunches Grapes Mr. Beisant and Mr. Cairns were again first and second. For two bunches of Black Hamburgh Mr. Cairns was first with very excellent examples, also for Black Alicantes and Muscat of Alexandria. The other fruit classes were fairly well competed for, and the quality was good for the season.

The show of vegetables was very excellent, exhibiting a very high level of cultivation. For a collection of twelve kinds the first prize was gained by Mr. J. Kinnear, Fernhall, who was ahead of the veteran prizetaker, Mr. J. Harper, Tullibeltoun, who on this occasion was second. Both lots were very fine, consisting of the best sorts now in season. Mr. Henry was third, but was first, however, in a collection of salads.

In the separate classes Leeks, Onions, Cauliflowers, and Tomatoes were conspicuous for fine quality. An interesting class for amateurs only (cottagers) was one for nine sorts of vegetables, for which a Corporation Cup and £2 was given as first prize. This was gained by Mr. A. Drummond, Fowlis Wester, Cricff, with a very beautiful lot, that would have done credit to practical gardeners. Second was awarded to Mr. R. H. Low, Dundee. Mr. Drummond was also first for a collection of six varieties.

Trade Exhibits.

As usual, the nurserymen of Dundee added largely to the attractions of the show by their large and fine exhibits, each "putting his best foot first." Messrs. W. P. Laird and Sinclair occupied the most prominent position with a very attractive exhibit, very varied, yet tastefully and harmoniously arranged. A large number of very creditable bouquets, wreaths, harps, and other designs were shown, showing very marked ability on the part of the executant, though slightly wanting in finish. They

had also beautiful vases of Sweet Peas, Roses, Carnations, &c., and many choice decorative plants. Messrs. Laird and Sinclair had also an extensive display of Coniferæ and shrubs temporarily planted in the grounds outside the tents.

Messrs. Storrie and Storrie, Dundee, exhibited in very attractive form a large number of their specialities, prominent being very grand single Begonias, for which the firm is famous, Streptocarpus, Celosias, Iceland Poppies (very dainty new varieties), Apples in pots, &c. Messrs. Storrie also exhibited a number of flowers and foliage plants in very tiny pots, grown with very little earth by the aid of "Storrie's Invincible Solution," products which certainly seemed very wonderful, and evoked great interest from visitors.

Messrs. D. and W. Croll had a tasteful exhibit of Roses, Carnations, Sweet Peas, and very pretty table plants, including well coloured Crotons.

Messrs. Thyne and Paton exhibited a large collection of table and other decorative plants and cut flowers in great variety; also a number of beautifully trained Ivies in pots.

Messrs. James Cocker and Sons, nurserymen, Aberdeen, came south with a most attractive exhibit, principally of Roses, beautifully arranged in baskets. These were very fine, some lovely Général Jacqueminot, Captain Hayward, Mrs. Cocker, Caroline Testout, being the admiration of everybody.

Mr. John Forbes, nurseryman, Hawick, had a beautiful display of florists' flowers, Dahlias, Pansies, Carnations, Phloxes, Pentstemons (very fine); for a bright bold seedling, Dr. Barrie, he was awarded a certificate. Beautiful Gladioli came from Mr. George Mair, Prestwick, Ayrshire, which included some interesting novelties. Chrysanthemum maximum King Edward from Mr. Angus, florist, Penicuik, was much admired. A nice collection of hardy border flowers came from Mr. Wm. Farquharson, Perth, and a similar exhibit from Messrs. Murphy and Sons, Broughty Ferry. Altogether the show was a great success, and reflected great credit on the committee for their labour in arranging, more especially on the courteous and energetic secretary, Mr. Hill, who had every arrangement in "apple-pie" order. The gate money for the three days amounted to £704, of which £493 was taken on the last day of the show, a proof that the masses in Dundee are permeated with a love for the beautiful.—M. E. T.

Sandy, Bedfordshire, August 27th.

At Sandy Show all classes were well filled. The ten stove and greenhouse plants from Cypher and Son, Cheltenham, made a fine display, and Vause, of Leamington, came second. Groups by Finch and Vause were much admired. Six foliage plants were a good exhibit, and the six Ferns from Sir A. Marshall, Buckden Towers, did credit to the grower. The open Roses class was exceedingly good for the season, Messrs. Burch, Peterboro' and Harkness, showing in good style. The chief Dahlia classes were fine, especially the Cactus selection from Keynes, Williams, and Co., Salisbury. Sweet Peas, as usual, were largely shown, but not at their best, as the heavy rains of late had spotted them.

Table decorations filled the tent, and the first prize was a neat, clean, tasteful table from Mrs. Seabrook, Ramsey Abbey Gardens. Fruit and vegetables are the leading feature at Sandy, the tent being always crowded with the public from the opening to the close. Eight dishes of fruit brought five entries. The first prize went to the Earl of Sandwich, Hinchlingbrooke, Huntingdon (gardener, Mr. J. Barson), Figs, Alicante Grapes, excellent Muscats, good in berry, but scarcely finished; Peaches, good; Nectarines, fine in size and colour; and Plums; also a good Melon. Mr. Folkes, Hemel Hempstead, closely followed, having Alnwick Seedling Grapes (excellent), also Muscats. His small dishes were not up to standard. Mr. Stone, The Downs, Croxton, was third.

The six dishes class was well filled. Mr. Sarle, gardener to the Marquis of Northampton, Castle Ashby, was first with splendid Muscats, the best in the show; but poor Alicante. There was a great falling off in his smaller dishes. Pines ought not to be allowed in the six dishes when not allowed in the "8." The second prize went to Mr. Lockie, gardener to A. J. Thornhill, Esq., Addington Hall, Hunts, with a neat, clean lot. Here only Foster's Seedling Grapes were weak, the other five dishes good. He had excellent Peaches, Nectarines, and Melons. I think the judges were led away by the Pine and the Muscats in the first prize exhibit. Mr. Modrel, gardener to Colonel Shuttleworth, was third.

The lead for two bunches of Muscats went to Mr. Barson, Hinchlingbrooke, these being small, but clean and well coloured; second, Mr. Folkes. "Any other white" went to Mr. Folkes with capital Golden Queen.

Six Nectarines went to Mr. Lockie with fine Rivers' Orange; second, Mr. Barson. For six Peaches Mr. Barson led with fine Barringtons. Figs: Mr. Seabrook, gardener to Lord de Ramsey, who also had the best outside Nectarines. Mr. Barson was first for eight dishes of hardy fruit, good for the season.

Vegetable classes were crowded. For a collection of eight distinct, the best prize in vegetables (given by Wood and Ingram, the Old Nurseries, Huntingdon) went to Mr. Barson; second, Mr. Lockie. For Messrs. Carters', six distinct, Mr. Folkes was first, closely followed by Mr. Barson. The closest run in the show. Mr. Folkes' Leeks were good.

Sutton and Sons' prizes: Six distinct, first prize, Mr. Folkes, Hemel Hempstead (a fine, well-set-up lot, all produce good); second, Mr. Lockie. The Society's prize for six distinct: first, Mr. Barson. The Society's ten distinct: first, Mr. Lockie. Webb and Son's: Six distinct, first, Mr. Folkes; second, Mr. Barson. Potatoes were excellent, and collections were good. Mr. Seabrook had a grand lot, but got disqualified; Mr. Barson came first after that, with a neat, clean lot. Cucumbers were largely shown. Mr. Lockie was, as usual, first, his pair were perfect. Mr. Leeds Smith, Miss Fitzpatrick, and Sir Robert Edgcombe and many others had good exhibits.—B.

Dumfries-shire and Galloway Horticultural.

The show of this society, held in Castledykes Park, Dumfries, on August 28 and 29, was one of the most successful ever held in the district, it being compared favourably with the memorable one held in 1862 to celebrate the society's jubilee. Since the present directors and secretary were appointed three years ago, the show has improved by leaps and bounds, and this year double the space occupied in 1892 was required for the exhibits. The quality has improved in a still greater ratio, and the show is now reckoned fully equal to any other held in the Scottish provinces. It was opened on the 28th by Mrs. Balfour Browne, of Goldielea, wife of Mr. J. H. Balfour Browne, K.C., who made an eloquent speech after Mrs. Balfour Browne had declared the show opened. On the two days more than 3,000 visited the park, and on the Saturday locomotion in the marquees was difficult on account of the crowds.

Non-competitive exhibits were not numerous, but Messrs. Fortheringham and King, Dumfries, and T. Kennedy and Co., Dumfries, sent fine tables of plants and flowers; J. Palmer and Son, Ltd., Annan, had splendid Roses; and Mr. J. Kennedy, Dumfries, new Cactus Dahlias; and Mr. J. McGuffog, gardener to the Countess of Selkirk, Balmae, sent fine Onions on exhibition.

One of the features of the open classes was the competition with tables of plants arranged for decorative effect. There were four competitors, and the first prize, the Burgh of Dumfries Challenge Cup, with a sum of money, went to James Service and Sons, Maxwelltown, Dumfries, with a beautiful arrangement of excellently grown plants; Mr. J. M. Stewart, Mollance, who won the cup last year, was second; Mr. J. Houston, Crichton Royal Institution, another former winner, was third; and W. Middleton and Son, Dumfries, made a good fourth.

In groups, Messrs. Service again led; Mr. R. Grigor, Woodlands, being second, and Mr. Houston third. In the open class, Palmer and Son were first for twenty-four Roses; W. Learmont and Son second, and J. Bogie and Son third. For eighteen Teas, Mrs. Rutherford, Crichton House, was first, and W. Learmont and Son second. J. Bogie and Son were first for a collection of Dahlias; Mr. J. M. Stewart being first for Cactus Dahlias, followed closely by J. Bogie and Son. Kerr Bros., Dumfries, were first for Carnations and Picotees.

Sweet Peas were extensively and well shown all through the show, the winners in the open class being, first, W. Learmont and Son, Dumfries; second, W. Adamson, Woodbank; third, W. Middleton and Son. Herbaceous plants were capitally shown, W. Middleton and Son being placed first; second, T. Kennedy and Co.; third, W. McGuffog, Balmae.

In the florists' classes there was great interest taken in the class for best and most tastefully arranged table decorations, consisting of "cut flowers and foliage only." After long consideration the first prize was awarded by the judges to Miss Jean Service, daughter of the president, for an elegant arrangement of Carnations, Roses, Sweet Peas, and Gypsophila; Kerr Bros. came second with a pleasing table, principally of Montbretia, which was also greatly admired. Mrs. L. Rutherford was third with an arrangement which found great favour with many.

The baskets and bouquets and glasses of flowers were exceptionally fine, the leading prizewinners being Mr. K. Mackenzie, Conbeath; Kerr Bros., R. Grigor, Middleton and Son, and Miss Rutherford, the last named winning in a strong competition for the most tasteful epergne. Pot plants were much better than last year, but there is still room for improvement. The leading prizetakers were C. McIver, Lincluden; J. Mundell, Allanbank; J. Houston, R. Grigor, J. M. Stewart, and R. Young, Gracefield.

Cut flowers in the classes for gardeners and amateurs were a large section, and mainly of wonderful quality, considering the disastrous weather, which had been so stormy that the large marquee was blown down a day before the show. The principal winners were J. Duff, Threave; J. M. Stewart, D. Whitelaw, Locharbriggs; J. Wright, Locharbriggs; R. Young, J. Houston,

J. Henderson, Elmbank; J. and W. Tweedie, Mouswald; K. Mackenzie, and Miss Whitelaw, Summerhill.

Fruit was not so plentiful as last year, in many gardens there being a complete failure of outdoor stuff. For a collection of fruit J. M. Stewart was first, J. Duff being second. For a collection of outdoor fruit B. Anderson, Glenlair, was first, and J. Duff second. Grapes were very fine. Black Hamburgh: First, J. Henderson; second, A. Robertson, Closeburn. Black Grapes (Hamburghs excluded): First and second, M. B. McDonald, Langholm. Muscats: First, J. Duff; second, A. Robertson. White Grapes (Muscats excluded): First, J. Duff; second, J. Henderson. Grapes, best bloom: First, J. Houston; second, A. Robertson. Grapes, best flavour: First, M. B. McDonald; second, J. Duff. In the other classes Messrs. Stewart, McIver, Duff, Rutherford, and McGuffog were the winners.

Vegetables were of high quality, Leeks, Turnips, and Onions being all capitally grown, the first being of really exceptional quality, those of Mr. J. M. Stewart in particular being remarked upon the judge. Mr. J. Duff had the best collection; second, J. Houston. In the smaller collection, W. Anderson, Collin, was first; second, R. Middleton, Kirkcudbright. Messrs. Duff, Middleton, Stewart, Mackenzie, Whitlaw, McIver, McGuffog, Henderson, and Houston were among the other prizewinners in the vegetable section.

Amateurs showed a marked advance on former years, and their vegetables and cut flowers were unusually good.—S. A.

Bristol Gardeners'.

This association held its monthly meeting at St. John's Rooms on Thursday evening last, Mr. E. Poole, F.R.H.S., occupying the chair. The lecture for the evening was on "Bees," and was given by Mr. Jordon, of the Bristol Bee-keepers' Association. He advised bee-keepers to make a special study of these industrious insects, which would help them considerably to become successful bee-masters. Gentlemen were becoming more interested in apiculture, and were realising the advantages through keeping in their gardens a hive or two of bees for fertilising their flowers and fruit. The time at the disposal of Mr. Jordon was unfortunately too short for such an interesting subject, and he was asked to continue his lecture at some future date, which he has promised to do. A discussion followed, and a cordial vote of thanks was passed for the most enjoyable evening. Prizes for an epergne of flowers went to Mr. N. C. Dobson (gardener, Mr. Thoday), Mr. Francis Tugard (gardener, Mr. Binfield), and Mr. Ambrose. A special certificate of merit was recommended for Mr. Gilbert Howes (gardener, Mr. White) for three Pitcher plants, an ordinary one going to Mr. W. Howel Davis (gardener, Mr. Curtis) for six sections of honey.—H. K.

Shirley (Southampton) Gardeners'.

The monthly meeting, held at the Parish Room on Monday, August 24, was devoted to a discussion on leaf fungi, opened by Mr. G. Verdon, of the Red Lodge Nurseries. The chair was taken by Mr. B. Ladhams, F.R.H.S. Mr. Verdon remarked that when they came to talk of fungi or mildew it was a very large question, for the varieties went into many thousands. Talk of it to some farmers, and they at once looked over their fields of corn in search of the brown lines or irregular spots which they had known for years as mildew. Ask the Hop-grower in Kent what was mildew, and he would tell you to look upon his Hops. Ask the laundry-maid and she might find you some on some linen. Then ask the Vine grower, and he shows you his particular variety, and the Onion man his; and the stationer and the plasterer all had their mildew or fungi to contend with. Mr. Verdon drew attention to the disease on the Thorn, Pear, Potato, and Pelargonium. A good discussion followed, in which Messrs. Jones, Ladhams, Cleveley, J. Miles (secretary), Greenslade (treasurer), and others took part. A certificate of merit was awarded to Mr. F. Snelgrove for two Zonal Pelargoniums. A vote of thanks to Mr. Verdon closed a very interesting meeting.—J. M.

Codiaeums (Crotons).

(Continued from page 142.)

TREATMENT OF OLD PLANTS.—Large plants that have by some means or other lost most of their leaves, and become straggly and unsightly, may be taken in hand at once. Allow the plants in question to become somewhat dry, and then prune them back; place them in a shady spot in the house, and keep the wood moist by syringing them as often as circumstances will permit. Just as the buds are beginning to burst knock the plants out of their pots, and cut off a couple of inches of roots and soil all round the ball; then with a pointed stick pick out as much of the old soil

as possible, reducing the ball so that it can be got comfortably into a pot two sizes less.

For potting use the compost previously advised, with the addition of a small quantity of $\frac{1}{4}$ in bones. Continue to syringe the plants often until the growth is well advanced, and then treat along with the other plants in the house. By March the plants will have rooted sufficiently to admit of being shifted into their original size of pot; if, however, the growth made is deemed insufficient for the size of the pot, defer the operation until August.

TRAINING.—Crotons are, with one or two exceptions, inclined to run up with a single stem; therefore, to form plants of a bushy nature, stopping of the shoots is necessary. Plants grown for table decoration are usually grown with a single stem; when they are too large for that purpose they can be stopped and grown on for specimens. If allowed to grow at random, the shoots, especially on large plants, grow up together in a cluster. The leaves on plants growing in this manner do not attain the size, nor develop the colour they should do, and there is generally a space just above the pot entirely devoid of foliage. To obviate this the shoots require to be tied down; a neat way to do this is to fix a wire round the pot, and tie the shoots down to it. This must be done gradually, and it will be necessary to go over the plants several times before they are brought down to the required level.

A FEW USEFUL VARIETIES.—In the narrow-leaved section are *Elegantissima*, *Angustifolium*, *Countess*, *Her Majesty*, *Chelsoni* (this does best grown as a standard), and *Picturatum* (requires very firm potting, otherwise it grows very straggly).

Among the newer varieties are *Gordoni* (slow grower), *Lucy* (a very graceful dark-red variety), *Mrs. Harry Green*, *Euterpe* (with interrupted leaves), *Diana*, *Elysian*, and *Hermon*; the last three varieties are very pretty, the leaves are twisted, and the colour of them yellow with light green margin.

In the medium section are *Hawkeri* (seen at its best in a young state), *Lady Zetland* (one of the hardiest, can be grown in a cool house), *Undulatus*, *Prince of Wales*, *Warreni*, and *Golden Ring*. The three latter varieties have twisted leaves; large plants of them look magnificent.

Among the broad-leaved varieties are *Nestor*, *Evansianus* (very free growing), *Disraeli*, *Thompsoni*, *Queen Victoria*, *Mrs. Aceton*, and *Mortefontaineensis*. The latter succeeds best in higher temperature than what is usually found in Croton houses. —G. R., Waddesdon.



Tree Moving Machine.

Transplanting Large Trees.

A few large trees and shrubs are indispensable in making a new or altering an old place. An astonishing effect can be produced with them that could not otherwise be produced in a lifetime. They not only add antiquity to the scenery, but comfort to the surroundings. Unsightly objects can be quickly and effectively hidden with a screen of large trees, thus transferring the objectionable into the beautiful. Although I do not advocate the practice of taking a delicate tree from a sheltered comfortable position to an exposed one where a stone wall would hardly be weather-proof yet I know of a very handsome pair of *Araucaria imbricata* that have been transplanted and doing well up in the Derbyshire hills, and I would rather risk this than see fine specimens cut and mutilated into disfigurement because they have overgrown the positions they were originally intended to fill instead of being removed to more roomy quarters. But the question may arise as to how these ponderous living giants are to be successfully shifted. There are many contrivances intended for the above purpose, but I know none so good as the simple machine invented by Mr. Barron of Elvaston, page 226. This was first used at Elvaston about the year 1830, and has been in constant use ever since with the greatest success. The inventor of it writes:—"In the year 1831 I transplanted a Cedar of Lebanon 43ft. high and 48ft. in diameter of branches. The stem of this Cedar, which at that time was 2ft. in diameter, is now more than 10ft. in circumference, and a picture of health and vigour. A tree 72ft. high was moved more than two miles in an upright position. Yews from six to eight hundred years old have been successfully moved long distances. Oaks and Larches from 40 to 50ft. high have been moved in the middle of summer without losing a leaf. Large Spruce and Silver Firs on the limestone formation have made shoots 18in. in length the second year after removal."

I will now endeavour to write a brief description of the working of these simple machines that may be a sufficient guide to enable the ordinary intelligent novice to use them efficiently. I will take for example a tree of 8 or 10 tons. First mark out a square shaped space about 8 by 10ft., dig out the ends first to a depth of 2ft. 6in., then burrow right under the centre of the tree for the purpose of inserting a strong centre plank capable of carrying the whole tree, when this is inserted under the bole of the tree with about a foot projecting out each end for the purpose of hooking the looped end of the winding rope on. The sides may next be dug out and the end planks inserted under the bole across the centre for the purpose of carrying the side planks, which are the next to be fixed. These planks should be 6in. longer than the mass to allow corner chains to be fastened. These prevent the tree swaying while being conveyed to its future position. If the tree has a long journey or the soil of a loose nature the sides will require to be supported with straw and boards bound together with ropes similar to a cooper hooping a barrel. Should the tree be very tall, guy ropes are needed to hold it in an upright position. These should be fastened to the tree as high as possible at right angles to enable four men to steady it while being moved, or they may be fastened to each corner of the machine, or both may be required in windy weather.

The tree will now be ready for the machine, which is taken in two parts. The hind portion may be first put into position ready to receive the side beams, which are attached to the front limber part of the machines. When the machine is put together the tree will be in the centre. Ratchet rollers are placed across the beams, one each side of the tree, and a double rope for winding. When these are in position and the loop end of the rope hooked on the centre plank, winding may be commenced steadily. Strong sling chains with a ring at one end and hook at the other are fastened to the side beam passing under the centre plank and hooked on the other side, and gradually hitched up as the tree is lifted, as a safeguard in case the winding gear gives way. When high enough to clear the ground, the chains may be fastened and the rollers slackened a little so that each chain takes an equal bearing. The principal weight is carried by the sling chains and centre plank.

The hole must be filled up level and planked over, or the machine will be difficult to get over the loose soil. If planks can be laid the whole distance, and horses cannot be used, men can move an immense weight, or pulleys can be brought into requisition. A square hole with the ends made slanting for the wheels to pass down may be dug with a furrow at the bottom for the centre plank to rest in, to prevent it getting fastened when the tree is lowered into its position.

The machine has to be taken to pieces as before when all the planks are removed. The furrow at the bottom must be firmly packed with earth to make a solid, flat foundation for the tree to rest on. When all is filled in the whole may be thoroughly soaked with water if necessary, and a lofty tree will require supporting with guy ropes or wire—especially in exposed positions—until fresh roots are made and the soil gets solid. It is a good plan to mulch fresh planted trees;

it is much better than using too much water. There are several different sized machines, which may be hired of Mr. Barron, Borrowash Nurseries, Derby, at moderate cost, with both experienced men and the requisite appliances, or I believe machines are made to order and sold by that firm.—G.

We are also enabled to give a few details from the pen of another practitioner, who writes of the work done at Canford Manor. The illustrations on pages 227 and 228 bear out his remarks. Thus:—

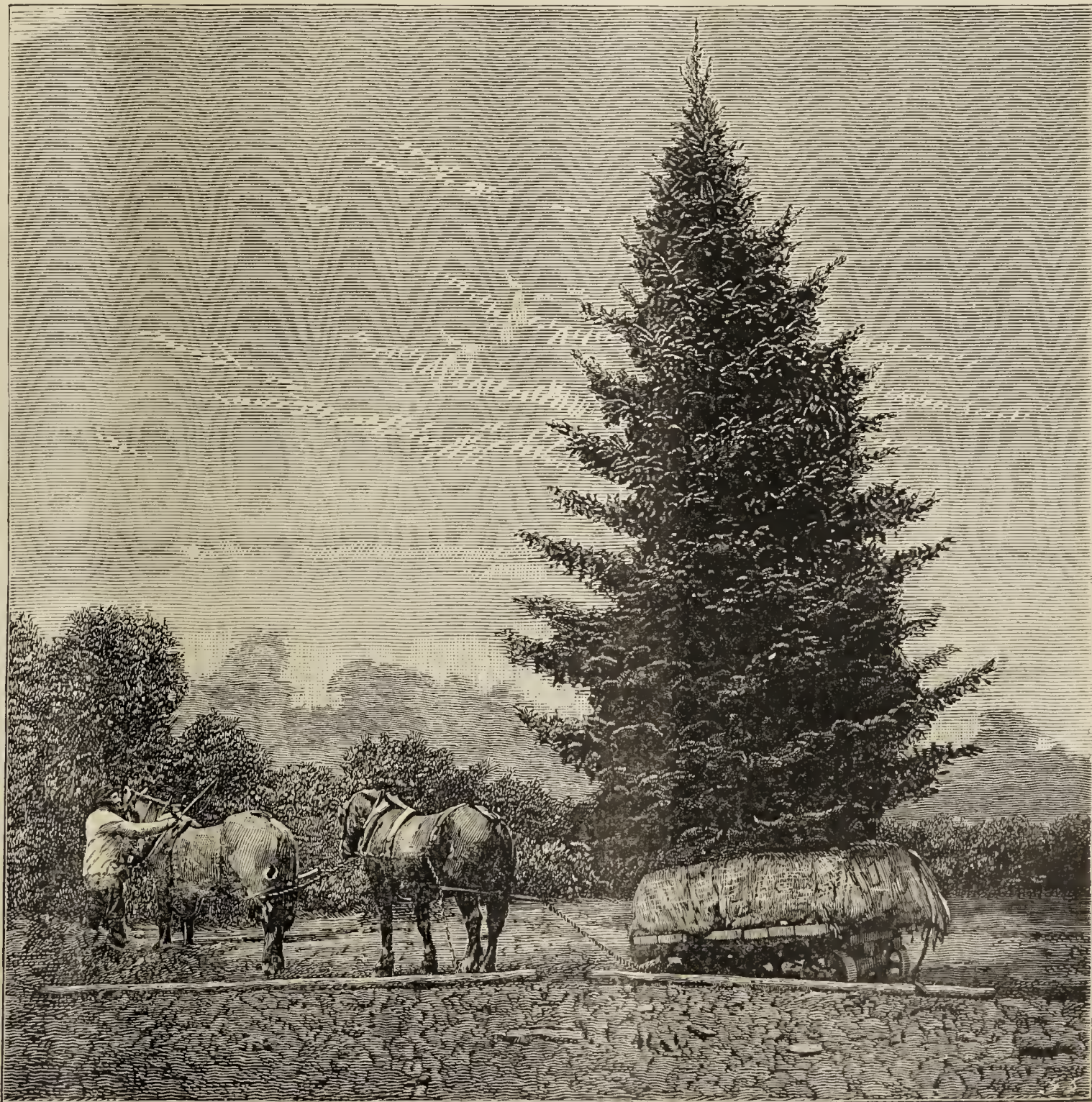
I will describe the operation of shifting the handsome *Picea nobilis*, of which a photograph has been sent with these notes. The first proceeding was to dig a wide, square, and deep trench so as to leave a ball rather more than 8ft. square, nearly the whole of which was preserved intact to a depth of 30in. Being well below the latter depth, the next step was to undermine the centre with crowbars sufficiently to admit of a stout plank 8ft. in length being thrust under, and this was duly blocked up lightly with the aid of piers formed with loose bricks. Four feet away from this on each side two other planks were similarly worked underneath the ball, and these being propped up with brick piers supported the edge of the ball when this was reduced to the desired width. The tree was then gradually undermined both ways, and planks added and bricked up as the work went on, these eventually supporting the whole weight of the tree, when the remaining subsoil was picked out. Care being taken to build these brick piers on a solid foundation, and all of one height (about 2ft.), the tree settled down on this without a hitch of any kind. While all this was being done by handy labourers, others were preparing a way out for the tree, an easy slope being needed.

Everything being thus well done, it was a comparatively easy matter to run a low strong trolley well under and close up to planks, the trolley being extra strong, capable of bearing 8 tons or more in weight, and constructed much after the pattern of the flat four-wheeled trolleys used for carrying luggage at railway stations. The bricks being knocked away the planks settle on the trolley, and the tree is ready for removal. Planks were laid for the trolley wheels to run smoothly over, but even with this aid it is not considered advisable to employ horses for drawing such heavy trees out, snatching and straining being bad for both the tackle and the trees. Instead of horses a strong "crab," or portable windlass, is used, and with this powerful aid the trolley is drawn out steadily and easily, scotches, however, being handy for stopping running back in case of either the ropes or chains snapping, as they sometimes do under the strain. Being once on the hard road planks were dispensed with, and four powerful horses managed to draw the tree to its destination.

Once more both planks and "crab" were brought into requisition. Being drawn with the aid of the latter into the exact position in which it was to remain, brick piers were once more formed under all the planks, and these supported the tree after the trolley was undermined and then drawn out. Fresh

good soil was then banked well up to the central plank, which was removed, and more soil very firmly pressed under so as to be well up to the old ball. This process was continued from the centre till all the planks were knocked away, and the tree was once more resting on the ground. Four days altogether were expended on the transplanting of this tree at a cost probably of less than £6, including horse labour.

For moving smaller trees, or any that two or four men can lift when duly prepared, Mr. Crasp (late of Canford, Dorset) had a handy invention of his own, and which is well worthy of being generally used. It consists of four elm boards, each 3ft. long, 9in. wide, and 1½in. in thickness, all being hollowed out somewhat so as to form a circular hole in the centre when put together, without, however, impairing their strength (see page 228). They are bolted together, a loop end being formed on the upper side of each bolt, and either being removed, the collar can be placed round the ball of a tree and again connected. First, however, a square trench is cut round the tree, so as to leave a ball 3ft. each way, the latter being then undermined sufficiently to admit of the collar being placed in position and connected. Each corner of this is then blocked up with bricks, and these, when the tree is undermined, support the collar and the tree. Occasionally a strong two-wheeled stone trolley with long powerful handle is run under the tree, and, the bricks being taken away, all is ready for removal. More often, though, strong cord loops are placed to each iron crook at the corners, and strong poles being passed through these two or four men lift the tree out of the hole and on to the trolley. The fresh site being duly prepared, four brick piers are again formed, the tree is lifted off the trolley on to these, soil being then firmly packed under the centre and well up to the sides, after which the collar is disconnected at one corner, the piers removed, and the tree is resting on the ground as before.—J. M. H.



Removing a *Picea nobilis* of 40 feet height.

A Flower Show in a Far Country.

I have, during the course of a long life, seen flower shows of all sorts and descriptions, from National Rose and Temple Shows, to Chrysanthemums, and down to the modest display in the small tent on the village green; all presenting points of interest, and all capable of giving much pleasure, if not to the spectator, at least to the successful exhibitor. Last week I fell on a little local show far away in the wilds of Westmoreland, under the shadow of great mountains and close to the gleaming waters of two lovely lakes. The village is cut in two by a brawling stream; some of the houses are perched on the hill sides, and Nature has done all she can to make the place beautiful. The gardens are wind-swept, and the summer has not been favourable to the growth of fruit or flower. The new school, not yet completed, was utilised for the occasion, and made smart with coloured muslins. The big windows were unglazed, and the views from each formed a series of perfect pictures. Purple Heather under a blazing August sun must be seen to be appreciated. The day was one of a few that will stand out in this summer as an example of what a summer's day should be. Here the heat is never excessive; there is always a breeze just sufficient to give that zest to the air that makes it so welcome to lungs that constantly breathe the vitiated atmosphere of the cities of the plain.

The show was called horticultural, but I found it as a matter of fact a variety entertainment. My first glance was directed to the cut flowers, and of the flowers to the Queen, the Rose. The village grocer is the strong man in this line, but there was not much chance of distinguishing himself, as the schedule only asked for two varieties, one example of each; and funny odd Roses they were—old varieties, with W. A. Richardson exhibited as a novelty! Where Caroline Testout had sprung from I could not ascertain. Never before had I seen an exhibit of Nasturtiums (*Tropæolums*), but here there were several classes where they flaunted their orange and yellow and brown faces.

Four distinct Asters brought forth several lots, and Stoeks were a strong class. Sweet Peas, too, unnamed, and all varieties massed in one vase, happily, however, arranged with additional or alien foliage. Some of the Pansies were pretty: all too stiff, and all to a man "gypsophilied," if I may use such a term.

The buttonholes were ornate and large. A poor little class of Tomatoes (only one dish) made an approach to effect; and the Leeks were thick and white and good.

Of course, a show could not be without the giant Marrow, far too big even for a pleasure barge for a fairy princess! Plenty of Cabbages and Lettuces, splashed with a deep red (a variety unknown to me); Potatoes with local names; Peas just a thought too old; and Kidney Beans pulled before their time.

"Fruit" was represented by some big, barrel-sided Apples and Rhubarb past its first freshness. But stay—yes, there were other fruits, in the children's section, collections of wild fruit. I am of an adventurous spirit, but I paused before those displays. I thought of Tommy and his sister Jane, and those berries which caused their untimely end. I recognised the Rasp—a microscope was almost necessary to see it, so tiny were the thimble-like fruits. Of mountain berries there was a store; Hazel-nuts and things in pods; but the children had done well with their trays of mosses—such variety, such beauty! What would I not have given for some of that velvety green to hide the stands of my Roses when "set up" at our home shows? such difficulty as I have in getting nice, clean, bright pieces.

The children had wild flower bouquets, and also collections of wild flowers shown, or gummed, on sheets of paper. I said it was a variety entertainment, and in a class room I found bread, tea-cakes, butter, honey, and eggs, all products of the villagers. Also sets of dolls' clothes, cut out and made by small fingers. Specimens of handwriting: "The Deserted Village" in all styles; big sheets of drawings, some black-and-white, some gay with colours; and, most practical of all, boxes each containing a well starched shirt, with two collars and a best pocket handkerchief. And knitted socks, too; and the industry of the neighbourhood in carvings in cedarwood, occupation for the long winter evenings, work for the boys when spade and rake must be laid aside. It was all so new and pretty and unusual; so simple, so unpretentious.

The officials told me that they were always so favoured by the Clerk at the Weather Office. Perhaps he is a native of these parts, and remembers the festival day when he was young, how it was made or marred by the weather. As I write, the windows of heaven are opened wide, and I can see a glassy film spreading over the meadow land in the valley. Yesterday, to-day, no one can stir abroad; the hills are blotted out, and for all I can see, the ocean might be where Skiddaw lifts his hoary head.

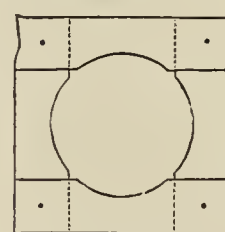
The few crops here are late and also light, and of that variety (Oats) which is inured to bad weather. A few belated patches of hay, which ought to have been secured before, stand in danger of being bodily landed in the lakes. It is a case for ensilage, not hay.

This is a country rich in Ferns: five varieties within a few yards of the village street, as I found. Mercury or Good-King-Henry is out on the waste land. Has it been an escape from a garden, or is this its native home? [It is native.—Ed.] Beautiful weeping country! I like your smiles better than your tears.—THE MISSUS.

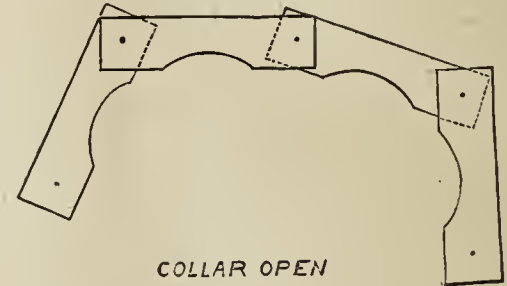
Book Notice.

The Book of the Peach.*

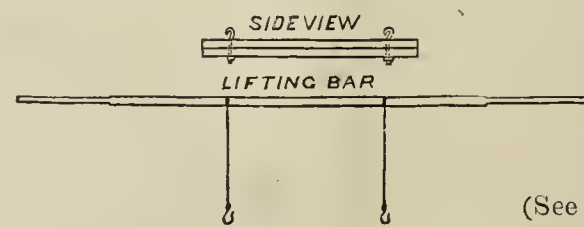
This is a practical handbook on the cultivation of the Peach under glass and outdoors, by Mr. H. W. Ward, who was for twenty-five years head gardener at Longford Castle, Salisbury. In his introduction the author refers to his success as an exhibitor of collections and single dishes of choice hothouse and wall fruits at the annual summer and autumn shows held at the Crystal Palace and leading provincial towns, and the Peaches and Nectarines in the Longford collections always excited favourable comments on the part of experts. Such status is backed by



COLLAR SHUT
READY FOR LIFTING



COLLAR OPEN



SCALE 1"=1 FOOT

(See page 227.)

experience of the Peach and Nectarine on 250 yards of wall and some six glass houses, forced and cool.

The author, in the opening chapter, expresses the wonder that the Peach and Nectarine are not grown much more extensively in favourable situations out of doors throughout Great Britain and Ireland than they are, seeing that suitable aspects are available for the growth of the trees and ripening of the fruit in every walled-in garden in every county and village in the United Kingdom.

This is rather sweeping, for our author clearly has not experience of attempting growing Peaches and Nectarines in high and cold districts, for their culture against walls is very uncertain, indeed impracticable, and even under glass heat is necessary to ensure safety from spring frosts and perfect the crops in cold and wet seasons. Still, I quite agree with the dictum that in many cases Peaches and Nectarines could be grown as well now as they were at the middle of last century and long before on open walls, even in favoured positions in the northern counties of England; but to attempt their cultivation on south walls at 500ft above sea level north of the Humber is simply courting failure.

Besides, what know the present young hands of training wall trees? And in this particular point they are not helped much in the chapter on the "pruning and training the trees." Of course, gardeners ought to know their business; but in books we expect to find illustrative matter, so that those who do not know may learn. This will perhaps be rectified in future editions, for in other respects the book is thoroughly sound and practical, and I strongly advise its perusal.—G. A.

PUBLICATIONS RECEIVED.—"An Introduction to Nature-Study," by Ernest Stenhouse; Macmillan and Co., 3s. 6d. * * "Missouri Botanical Garden Administrative Reports for 1902." * * "Missouri Botanical Garden: a History," by William Tralease, LL.D. * * "Oxfordshire County Council: Annual Report of the Technical Instruction Committee for the year 1902-3."—August 5, 1903. * * "The Garden Gazette," Vol. I., No. 12, July, 1903. This Australian horticultural newspaper (published at 28, Temple Court, Collins Street, Melbourne) has now lived through its first year, and is likely to go on prosperously henceforward. It is charmingly illustrated, well conducted, and is doing a good service in Australia. * * "The Indian Agriculturist," containing: Planters and Rhea cultivation, Rubber plant (new), Australian fruit fly, &c.

* The Walter Scott Publishing Company, London and Newcastle-on-Tyne. Price 2s. 6d.



Hardy Fruit Garden.

PREPARATIONS FOR STORING FRUIT.—Although in many instances the fruit crop this season will not be a heavy one, yet what there may be to gather and store ought to receive the best treatment, especially where high culture has been given and every effort made to develop and finish well the crop. When this has been done, and the gathering carried out on careful lines, the storage of the crop is of next importance. The best place for storing fruit is undoubtedly a properly arranged fruit room with tiers of shelves for holding the fruit. The fruit-storing trays are also valuable, and these may be placed in any suitable room or structure. Fruit rooms must be scrupulously clean and sweet, therefore before any attempt is made to store fruit, thoroughly wash out the whole place, limewashing the walls, and carefully scrubbing the shelves and floor. After this allow several days for the place to be thoroughly dry, throwing the doors and windows wide open for the purpose of ample ventilation. Retain nothing in the place which will cause dust, dirt, or taints of any kind.

GATHERING FRUIT.—To gather fruit judiciously it cannot be picked all at once, as a rule. The very early varieties of Apples, which need little or no storing, like Beauty of Bath, Irish Peach, and Lady Sudeley, which may be eaten direct from the trees, do not fully perfect every fruit at once. The forwardest only should be picked, leaving the rest to mature further. It is easily known which fruits are ready by the ease they part from the spurs, on lifting to a horizontal position. The same tests apply equally well to Pears, but it is always desirable to gather them before they are fully ripe. Just when the fruits begin to colour and can be readily detached from the trees is the best time. They may be finished in the fruit room, where they develop a melting, juicy, and rich flavour. Left too long on the trees many of the early Pears eat mealy. The fruits must not be bruised in picking, as this will be against their keeping for any length of time.

STRAWBERRIES: OLD BEDS.—The continuous wet weather has in many cases prevented the necessary work in clearing off runners. It is important they should be removed, together with any crop of weeds which may be springing up among them. If a further lot of plants are needed to plant new beds, a selection of the best should be made from outside rows, or wherever such can be found that have not been crowded. Cut the runners off close to the old or parent plant, and any old leaves at the same time. Should the surface roots be much exposed a mulch of decayed manure mixed with decomposed vegetable matter and wood ashes may be spread along the rows.

PLANTING STRAWBERRIES.—Strong rooted plants will be plentiful now, even where no special attention has been given in preparing rooted runners. Lift them from the positions where they have rooted into the soil between and outside the rows. They may be obtained with balls of soil adhering, and can be planted at once permanently in rows where they are to fruit. Should the ground not be ready for their reception, temporarily insert them in nursery beds, from which they may be readily lifted and planted a little later almost without receiving any check. Plants of new varieties received from a distance are not, unless in pots, in a condition ready for immediate permanent planting. It is, therefore, a good plan to give them nursery bed treatment for a time, carefully spreading out the roots in good soil, in which they will form tufts of fibrous roots readily, and soon be ready for transferring to fruiting quarters. Much will depend, however, on the size of the plants or rooted runners whether they are ready for autumn or spring planting.

OUTDOOR FIGS.—Shoots for future bearing ought to be selected from the current year's growths, those of medium strength being the best, which lay in close to the wall at full length. Growth bearing the season's crop must be stopped a few leaves beyond the fruit, such growths being cut out after the crop has been gathered, thus leaving room for the full and complete ripening of the shoots, without which a satisfactory crop the following year cannot be depended upon.

MORELLO CHERRIES.—These Cherries will keep a long time on the trees, providing they are protected from birds by nets, but it is possible the demand for the fruit has long exceeded the supply, and the trees, principally on walls and espalier fences, are now clear of the crop. This being so, it is desirable to direct efforts to the complete ripening of the wood for next season's crop. The first essential is to cut out the old bearing wood—that

is, if the fruit has been produced on long shoots laid in last year for the purpose, but if the fruits have been borne on spur growths, these must remain. The shoots required for fruiting are the medium sized growths of the current season. Not all these the trees produce will be required, therefore, a general thinning out must be adopted, discarding on the one hand very strong shoots, and on the other very weakly ones. Dispose the branches and shoots in their proper positions on the walls or fence, training them thinly, whereby the ripening influences of sun and air can act upon them. Growth for which no room can be found may be cut out entirely or shortened, if well placed with a view to their forming spurs. With the exception of these, train all others at full length.—EAST KENT.

Fruit Forcing.

CUCUMBERS: WINTER FRUITING.—The plants from seed sown in August will now be ready to plant out. First of all, thoroughly cleanse the house, removing every particle of old soil, and scalding the whole of the interior with boiling water. Then wash the woodwork with paraffin, softsoap, or carbolic soap, limewashing the walls with hot lime and a small handful of flowers of sulphur in each pailful. Make the drainage secure with a layer of turves, previously charred or scalded. Put in hillocks or ridges of soil, and plant when the compost is warmed through. Shade from bright sun until established. Maintain a day temperature of 70deg to 75deg, 85deg to 90deg from sun heat, and a night temperature of 70deg, falling to 65deg or even 60deg in the early morning. The plants thus attended to will fruit in late autumn, but they must not be cropped too much if they are to give a plentiful supply from Christmas to the spring.

PEACH HOUSES.—Too luxuriant trees should be checked by making a trench one-third the distance from the stem that the trees cover in extent of trellis, cutting quite down to the drainage. Care must be taken that the trees do not suffer for want of water whilst the trench is open. This proceeding should be followed by a good watering. Root-pruning and lifting must be deferred until the leaves give indications of falling, but these operations are best performed as soon as the wood is sufficiently matured, and whilst the leaves, or some of them, are upon the trees.

LATE HOUSES.—The dull and wet weather has not been favourable to the late varieties, but they promise to be of large size, and, with fine summer weather, will be strikingly beautiful and excellent in quality. The trees must still have sufficient water, though a somewhat drier condition at the roots is desirable when the fruit is ripening than when it is swelling, but if kept too dry the fruit is mealy. A free circulation of air is necessary, utilising the sun heat as the fruit is backward, and with ventilation early in the day the temperature may run up to 85deg or 90deg, which is preferable to fire heat at a later period. Keep the wood thin, stop any growing shoots at about fifteen inches, or to such length as is likely to become matured, and whilst the leaves, or some of them, are upon the trees.—ST. ALBANS.

Trade Notes.

Dicksons, Chester.

Among the bulb catalogues worthy of special notice at this time we would commend that of the firm named in our headline. This catalogue is under number 574, which avoids confusion with others that have gone before. It is well illustrated with good views of growing bulbous flowers, and also individual blooms of choice sorts. The descriptive letterpress conveys an impression of the characters of the numerous subjects. All genera of any decorative merit are included, and cultural remarks are not wanting. It is thus a useful guide as well as reference book on bulbs and their treatment. On page 31 Messrs. Dickson have compiled a separate detailed index of Narcissi.

Barr's General Bulb Catalogue.

Recently we referred to Messrs. Barr's Daffodil catalogue, which is separate from the autumn bulb catalogue. We would specially draw attention to their list of novelties and specialties for 1903, on pages 5—8 of the general bulb catalogue. Good practical notes on culture are given on page 1 of the general bulb catalogue and on pages 3—5 of the Daffodil catalogue. We notice that these catalogues are arranged on a strictly alphabetical system for easy reference. Amongst the new things we would name the yellow Freesia, Liliun elegans Peter Barr, Irises bucharica, persica Heldreichi, Warleyensis, Sofarana magnifica (all seemingly vigorous growers), Muscari Heavenly Blue (a gem), and Lycoris radiata alba.

THE BEE-KEEPER.

Beeswax.

This is familiar in every household. Its composition is generally considered to be 80.20 per cent. carbon, 13.14 hydrogen, and 6.36 oxygen, and its specific gravity 0.969. Beeswax is the result of a chemical process in the body of the bee, which requires certain conditions. A temperature of 85deg to 90deg is necessary for its secretion. Much honey is consumed during its elaboration, and to obtain the requisite temperature the insects cluster, the wax exuding on what are termed the wax pockets, which may be seen by pressing the abdomen of the worker bee so as to cause its distention.

On these ventral plates there will be found scales of wax forming in different stages. The bee seizes these little pieces of wax with one of its hind legs, and carries them to its mouth, and after masticating them for a moment they are formed into the cell walls of the combs they are building. A temperature of 85deg to 90deg is necessary for working the wax, as it only becomes plastic at 85deg. Beeswax forms a considerable article of commerce, large quantities of it being imported into this country when it is used for various purposes—furniture and boot creams, phonograph records, and it is used largely by dentists for making impressions of the gums preparatory to fixing false teeth.

Pure beeswax is bright yellow in colour, and has an agreeable balsamic odour not unlike some kinds of honey. Vegetable wax is not soluble with ether, while beeswax is partially soluble. Beeswax adulterated with 50 per cent. of vegetable wax would be detected by ether. A simple test of purity is to chew a fragment, which if pure will not clog on the teeth.

The bee-keeper should preserve all scraps of comb and extract the wax when convenient. When extracting, it should not be overlooked that the wax must not be subjected to oven heat, as it makes it hard and brittle. A good, simple method where a wax extractor is not possessed is to partly fill a large pan with water, and after putting the wax into a muslin bag and tying it, place it in the pan and let it boil over a medium fire until the wax rises to the surface; then remove from the fire and allow it to cool and settle. When cold, the refuse will all be at the bottom, and what little remains adhering to the under portion of the cake of wax should be removed, after which, if it is thought necessary, it may have another boiling in clean water, which will refine it still more. By the use of the wax-extractor all old combs can be utilised, and the wax made up into foundation and again given to the bees for the reception of honey.

For sale and exhibition, however, wax should always be extracted in a double vessel similar to a glue pot. The combs are broken up and placed in the vessel with sufficient water to cover them, and heated until the wax rises quite clean and of the best quality. For show purposes the cappings of honey cells should be used, as they are made of wax only. Brood cappings have pollen added to make them porous, therefore the inferior cappings of combs should be rejected. Wax should always be rendered in rain water, which, besides other advantages, will increase the yield of wax considerably. If hard water is used an acid should be added to unite with the lime in the water, and prevent it from attacking the cerotic acid of the wax. The acid generally used is hydrochloric, or nitric, of which a teaspoonful is sufficient for half a gallon of water. It is also essential that the combs should be thoroughly soaked in water before rendering the wax.

After refining, the wax should, if for sale, be moulded presentably. The moulds, to prevent the adhesion of wax, should be slightly oiled or rubbed with glycerine. Dipping in cold water will answer the same purpose. Some of the finest wax should then be poured into the moulds and made to run all round it to form a shell. This must be allowed to cool, and then more added, afterwards pouring in the bulk. The object of this is to have the indifferent wax or any sediment in the centre of the cake, and the outside perfect. The cooling process has also to be carried out carefully, or the cakes are liable to crack. The moulds should be placed near the fire and covered up to permit the wax to cool gradually. During the melting the wax should not be subjected to a higher temperature than its melting point, i.e., 145deg to 150deg.—E. E., Sandbach.

Marketing Honey.

Many of our bee-keeping friends have now some honey for sale, and are naturally very desirous of disposing of it at once. But this is one of the greatest mistakes that a beginner makes. Do not be in too great a hurry; learn to wait, and you will probably reap your reward. In the first place the yield of English honey will not, in all probability, be heavy, so prices will be comparatively high, and those who are in such haste oftener than not sell at a sacrifice. Endeavour to create a private connection; sell at a reasonable price, and always provide a good

article. Many years ago I learned this lesson from a most successful fruit salesman in one of our largest markets. In the course of conversation we spoke of the qualities of British and American Apples, and he said: "Whenever I open a barrel of American Apples, whatever sample is at the top, I can rely on finding the same at the bottom; but I regret to say that British packed Apples are oftener than not topped with the best, and they decrease in quality as I near the bottom." Let us learn a lesson from this, and I am sure your friends will never desert you, and your customers will increase, but perhaps slowly.

SELECTION.—Remember it is a food, and all of us like to see that which we have to eat clean and attractive in appearance. The best cooked dinner badly or untidily served is never enjoyed nor appreciated. On removing sections from the hive grade them, placing all of one quality and finish together, and the highest grade will command a higher price. Scrape the wood well, removing all propolis, and a white border of wood will set off the well finished section and make it look appetising. If the honey has to be sent a distance use spring crates, or disaster will certainly follow. A home made one may be easily contrived out of an orange or egg box by the aid of a few springs purchased of the upholsterer. If the honey be extracted, strain it well through a piece of cheese cloth. Be certain it is quite ripe, and run it into clear glass bottles or jars, with neat labels bearing your name and the guarantee that it is "pure British honey," and not imported glucose, which has done so much to lower the price of the British production.

PRICE.—I was reading a standard work on the price of honey, and the writer says the price for section honey varies from 1s. 4d. to 1s. 8d., and extracted from 10d. to 1s. This is very wide of the price that any friend of mine ever realises. Last year I disposed of about 260lb at 9d. per lb, and I was very well pleased, for it worked out at a profit of nearly £9 when all had been paid for. By endeavouring to obtain a fancy price you lose in the long run. An acquaintance of mine would not sell any honey at less than 1s. per lb or section, with the result that he barely cleared expenses; and by selling at 9d., and placing it within the reach of a greater number, he would have secured a handsome profit.—HYBLA.

TO CORRESPONDENTS

* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion.

TENNIS COURT (G. R.).—The ground for a tennis court should be level, smooth, firm, and well drained. For how to mark off a court, see our issue for April 2, this year, where there is also given an illustration, sizes, &c.

CINERARIAS DYING OFF (P. K.).—The Cinerarias are not infested by any disease, but are killed at the roots and root-stem level with the soil, and is probably due to watering them with Little's soluble phenyle in too powerful solution. In no other way can we account for the death of the plants, the roots being certainly destroyed, and we did not find the eelworm and Radish grub you allude to as being present, though you do not attribute the collapse of the Cinerarias to them. We think the evil is in giving the plants "too much of a good thing," the soil also being wet and sour; and the plants also seem to have been badly potted.

CHRYSANTHEMUM LEAVES BROWNEED AND WITHERED (X. Y. Z.).—The leaves have the appearance of attack by Chrysanthemum leaf blight (*Cylindrosporium Chrysanthemi*), but we did not find the fungus, though the blotches have the yellow marking at the circumference of the browned parts that indicate the presence of the mycelium in the tissues of the leaf. This appearance, however, obtains when the leaf tissues are destroyed by wet lodging on them for a considerable time, as has been the case during the recent and continued rainy weather, and we should attribute the browning to that cause. Possibly dusting with black sulphur (*sulphur vivum*) would have a good effect. The Orchid is an *Odontoglossum*, but we do not recognise the particular variety. Consult an Orchid specialist in your locality, as it is impossible to name varieties without comparison.

PHOTOGRAPH RECEIVED (J. Udale).—Received with thanks, and will let you know soon.

INARCHING MUSCAT OF ALEXANDRIA UPON GROS COLMAN GRAPE (D. C.).—So far as we have judged, the inarching will have no effect on the flavour of either Grape, or only the faintest. But what is your object? That, you do not state.

MARECHAL NIEL ROSE (E. J. W.).—This beautiful Noisette Rose strikes freely, and grows well from cuttings, many preferring it on its own roots. The author of "The Book of the Rose" (which book you should possess), however, says it does much better budded on the Briar than on its own roots, and he is authoritative.

CUTTING OFF TOP OF TULIP TREE (F. L.).—This splendid tree, far too uncommonly met with in pleasure grounds, is rather impatient of heading down, not breaking freely, and sometimes not at all, from the old wood. We, however, have no experience of pollarding a large tree. The most we have seen was the reduction of the head considerably to balance it, in consequence of a limb being broken off, and this left a considerable number of small branches with buds, which is different from leaving only bare wood. Perhaps some of our correspondents may have experience on this particular point, and will favour with its expression.

BLACK CURRANT SHOOT (W. W.).—Yes, the shoots are infested in the buds with the Black Currant bud mite (*Phytoptus ribis*). As the scales of the buds are more or less open, due to the growth of erineum or hairs caused by the mites, spraying the bushes with paraffin oil emulsion solution would have a good effect, diluting the emulsion with ten times its volume of water. The emulsion is readily made by dissolving one quart of soft soap in two quarts of boiling soft water, and on removing from the fire, and while still boiling hot, adding one pint of paraffin oil, and immediately churning the mixture with a small hand syringe, then, in five minutes, a perfect emulsion will be obtained. This diluted ten times with hot soft water, and well mixed, may be sprayed on at a temperature of 135deg to 140deg, thoroughly treating the bushes. When they are leafless, the bushes may again be sprayed with the paraffin oil emulsion solution at a strength of one part emulsion to seven parts water, the treatment being thorough.

SKELETONISING LEAVES (J. J. G.).—1. Steep the leaves in rain water in an open vessel exposed to the sun and air. Water must occasionally be added to compensate for evaporation. The leaves will soon putrefy, and their membranes will begin to open. When they have reached this stage lay them on a clean, white plate, filled with fresh water, and with gentle touches take off the external membranes, separating them cautiously near the middle rib. When there is an opening towards the latter the whole membrane separates easily. The process requires a great deal of patience, as ample time must be given, sometimes three months or longer, for the vegetable tissue to separate. When perfectly cleared from the cuticle, &c., bleach the leaves in a solution of chloride of lime, made by adding a tablespoonful to half a gallon of water; the operation of bleaching may be expedited by adding half a tablespoonful of vinegar to the solution. When the leaves are taken out of the bleaching liquid put them into clean water for a short time, and then carefully dry them, either between blotting paper before the fire or in the sun, after which they may be pressed flat in books. 2. A more expeditious method is to take a tablespoonful of chloride of lime mixed with one quart of spring water. In this the leaves should be soaked for about four hours, then taken out and well washed in a basin filled with water, after which they should be left to dry, with free exposure to light and air. Some of the larger leaves, or such as have strong midribs and veins, will require to be left for rather more than four hours in the liquid.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (C. C. M.).—We think the Rose is Maiden's Blush, but we have had no opportunity to compare it with a growing specimen. (A Lady Reader).—*Tamarix gallica*. (J. B.).—*Rubus roseifolius* var. (F. N.).—1, *Juglans regia*; 2, the yellow form of the False Acacia; 3, *Genista aetnensis*. (F. L.).—1, *Solanum nigrum*; 2, *Montbretia crocosmaeflora*. (J. T. V.).—*Bredia hirsuta* (see Gadding and Gathering this week).

Trade Catalogues Received.

Bulbs.

R. H. Bath, Ltd., The Floral Farms, Wisbech.
H. Cannell and Sons, Swanley.
James Carter & Co., High Holborn, London, W.C.
Wm. Clibran and Son, 10 and 12, Market Street, Manchester.
Frank Dicks & Co., 68, Deansgate, Manchester.—Also Roses and Flowering Plants.
Dicksons, Chester.
Dobbie and Co., Rothesay.
W. Fromow and Sons, Sutton Court Nurseries, Chiswick, W.
Hogg and Robertson, 22, Mary Street, Dublin.
Kent and Brydon, Seedsmen, Darlington.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1903. August.										
Sunday ...23	W.	deg. 59.2	deg. 54.6	deg. 78.8	deg. 38.5	Ins. 0.16	deg. 61.4	deg. 61.2	deg. 59.1	deg. 35.2
Monday ...24	S.S.W.	55.0	54.2	67.9	44.2	0.96	61.8	61.3	59.2	40.6
Tuesday ...25	W.S.W.	55.2	53.6	61.3	51.0	0.02	60.7	61.0	59.2	49.2
Wednesday ...26	S.S.W.	57.8	54.2	69.6	39.6	—	58.8	60.5	59.2	35.5
Thursday 27	S.W.	64.3	57.8	60.5	52.2	0.07	60.5	60.5	59.2	49.0
Friday ...23	W.S.W.	59.3	56.2	71.2	53.0	0.19	61.2	60.5	59.0	51.6
Saturday 29	W.N.W.	61.0	61.3	69.7	58.5	—	62.5	60.8	59.0	57.6
MEANS ...		58.8	56.0	68.4	48.1	Total. 1.40	61.0	60.8	59.1	45.5

A week of variable weather, with rain on five days.

Covent Garden Market.—September 2nd.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, Italian, per pad	6 0	to 0 0	Pears, Williams, 48's,		
" cooking, bush.	6 0	8 0	per case ...	6 0	to 7 0
" dessert, ½-bush.	5 0	9 0	" small, ½-sieve ...	6 0	7 0
Bananas ...	10 0	15 0	Pines, St. Michael's	3 0	5 0
Grapes, Alicante, lb. ...	1 0	1 3	Plums, Rivers', ½-sieve	8 0	9 0
" Hamburgh ...	1 0	1 6	" Orleans, "	9 0	10 0
Lemons, Messina, case	10 0	15 0	" Victorias, "	8 0	9 0
Oranges, case ...	10 0	15 0			

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 0 0	Leeks, bunch ...	0 2	to 0 2½
" Jerusalem, sieve	1 6	0 0	Lettuce, Cabbage, doz.	1 0	0 0
Batavia, doz. ...	2 0	0 0	Mushrooms, forced, lb.	0 8	0 9
Beet, red, doz. ...	0 6	0 0	Mustard & Cress, doz.		
Cabbages, Spring, tally	2 0	3 6	punnets ...	1 6	0 0
Carrots, bunch ...	0 2	0 0	Onions, bushel ...	3 0	0 0
Cauliflowers, doz. ...	2 0	3 0	Parsley, doz. bnchs. ...	2 0	0 0
Corn Salad, strike ...	1 0	1 3	Peas, bushel ...	4 0	5 0
Cos Lettuce, doz. ...	1 0	0 0	Potatoes, cwt. ...	5 0	6 0
Cucumbers doz. ...	2 0	3 0	Radishes, doz. ...	0 9	1 0
Endive, doz. ...	1 6	0 0	Scarlet Runners, bush.	4 0	5 0
Herbs, bunch ...	0 2	0 0	Spinach, bush. ...	2 0	0 0
Horseradish, bunch ...	1 3	1 6	Tomatoes, English, lb.	0 3	0 4
			Turnips, bnch. ...	0 0	0 2

Average Wholesale Prices.—Plants in Pots

Most of the undermentioned plants are sold in 48 and 32-sized pot

	s. d.	s. d.		s. d.	s. d.
Aralias, doz. ...	5 0	to 12 0	Grevilleas, 48's, doz. ...	5 0	to 0 0
Araucaria, doz. ...	12 0	30 0	Heliotrope ...	4 0	6 0
Aspidistra, doz. ...	18 0	36 0	Hydrangeas, pink ...	12 0	0 0
Crotons, doz. ...	18 0	30 0	" white ...	12 0	18 0
Cyperus alternifolius			Lycopodiums, doz. ...	3 0	0 0
doz. ...	4 0	5 0	Marguerite Daisy, doz.	6 0	0 0
Dracæna, var., doz. ...	12 0	30 0	Myrtles, doz. ...	6 0	9 6
" viridis, doz. ...	9 0	18 0	Palms, in var., doz. ...	15 0	30 0
Ferns, var., doz. ...	4 0	18 0	" specimens ...	21 0	63 0
" small, 100 ...	10 0	16 0	Pandanus Veitchi, 48's,		
Ficus elastica, doz. ...	9 0	12 0	doz. ...	24 0	30 0
Foliage plants, var, each	1 0	5 0	Shrubs, in pots ...	4 0	6 0

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.
Arums, doz. ...	3 0	to 4 0	Lily of Valley, 12 bnchs	9 0	to 12 0
Asparagus, Fern, bnch.	1 0	2 0	Marguerites, white,		
Carnations, 12 blooms	0 6	1 0	doz. bnchs. ...	1 0	2 0
Cattleyas, doz. ...	10 0	12 0	" yellow, doz. bnchs.	1 0	0 0
Croton foliage, bun. ...	0 9	1 0	Myrtle, English, bunch	0 6	0 0
Cycas leaves, each ...	0 9	1 6	Odontoglossums ...	4 0	0 0
Eucharis, doz. ...	1 6	0 0	Orange blossom, bunch	2 0	0 0
Gardenias, doz. ...	2 0	0 0	Roses, Niphetos, white,		
Geranium, scarlet, doz.			doz. ...	1 0	1 6
bnchs. ...	3 0	4 0	" pink, doz. ...	1 6	2 0
Gladiolus, The Bride,			" yellow, doz. (Perles)	1 6	2 0
doz. bun. ...	4 0	0 0	" Liberty, doz. ...	2 0	0 0
Ivy leaves, doz. bun. ...	1 6	0 0	" Generals ...	1 0	1 6
Lilium Harrisii ...	2 0	0 0	Smilax, bunch ...	2 6	3 0
Maidenhair Fern, doz.			Stephanotis, doz. ...	1 6	0 0
bnchs. ...	4 0	6 0	Tuberoses, gross ...	2 0	3



The Master's Eye.

A farmer of a past generation being asked what manure he applied to his land replied, "Shoe leather," meaning that the wearing of boots in tramping to and fro o'er his fields was considered by him to be essential to successful farming. The principle which was in the mind of that farmer is essential to the successful conduct of every class of business, for it means, in plain words, close personal supervision of details.

No doubt there are capable foremen who can take this close drudgery work off the master's hands; but such men are difficult to find, and even the best of them cannot put the same personal interest into his work as the master can. In the case of foremen of average calibre, it too often happens that they have axes of their own to grind, and a labourer who is not too particular about doing a few odd jobs for the foreman *out* of work hours, may be allowed a very easy time *in* them.

We sometimes hear people lament the disappearance of the gentleman farmer, by whom they mean the man who shot and hunted, and left the serious work of farming to the hands of his bailiff or foreman. That such men are now comparatively scarce there is no doubt; but are they farmers? We emphatically answer—No. A farmer, as we opine, is one who makes business, not pleasure, the first consideration, and attends closely to it. We have good reason for believing that large profits cannot be expected from the pursuit of agriculture, and that farming for amusement should only be taken up by those who have well-lined pockets. Therefore we need not further emphasise the statement that those who take up farming seriously must prosecute it fully in every detail. To succeed, a farmer should absolutely be master, and he cannot be so if he leaves everything to a foreman, which he must do unless he is prepared to see all his orders carried out personally.

On large mixed farms there are generally at least three responsible men—the foreman, the shepherd, and the cowman or yardman. Each has his own department. The foreman superintends the cultivation of the land; the shepherd is responsible for the welfare of the sheep, as the yardman is for the cattle and pigs. If the master personally superintends these men, everything works harmoniously: there is only one master, and he is supreme. But if the stockmen are ruled through the foreman, there arises a dual responsibility with unsatisfactory results. What is anybody's business is nobody's business, and much time is spent in wrangling instead of getting work done. However large the farm, there is the greatest need for the farmer to see the work done; and with the bicycle to aid the horse, and his own legs, it is a poor excuse for him to say that he cannot see to everything.

A personal friend of ours who is very active on his bike declares that he has saved at least £100 per annum in manual labour since he began to farm on it. He is practically his own foreman, although he pays a man to act in that capacity. He does a good share of the shepherd's work on that same bike, and thereby is able to employ that shepherd profitably elsewhere. Such a procedure, if carried out by the foreman, would be instantly resented by the shepherd as an interference with his work and result in endless bickering.

It is astonishing to see the difference in the working energy of the men employed by such a master and those employed by one who gallops into the fields about 9.30 and is away again before he has had time to see who is there. The latter's men know where the hounds meet and that they will be free from supervision for the remainder of the day. Another man we know makes a point of seeing every man at work at least once a day, and greatly varies the times of

his visits. As one of his men observed, "We always have to keep at it, for Jimmy always comes when we don't expect him. Farmers should always pay their men's wages personally; for it is a bad plan to delegate this duty to a foreman, as it exalts the importance of the latter at the expense of the master. If the farmer sees his men at work every day and pays them himself, he should be able to avoid any undue leakage of hard cash as regards the wages account; and it is the wages bill which is the most serious item of the farmer's expenditure.

The master's presence is most necessary on threshing days. It is always advisable to keep a strict look-out to see that good corn is not diverted to uses which its owner would not intend it for. It is also necessary to watch the threshing process, to see that on the one hand the grain is all separated from the straw, and on the other that it is not bruised and broken by too much threshing.

The selling of the corn should also be a personal duty of the farmer. He should see to having his samples properly dressed by the winnowing machine, blower or screen, and that the bulk of grain has been so thoroughly mixed together that he can deliver it all alike and equal to sample. Personal and careful attention to these matters soon meet with appreciation on the part of millers and maltsters, who will bid above the market's limit of price rather than miss that which they know will prove satisfactory.

Exactly the same principle applies to the sale of fat stock. The auction system has taken deep root in this country, but it is entirely owing to the laziness of the farmers of the last generation. It is much easier to send cattle and sheep to an auction than to stand with them for hours in the open market. Many farmers nowadays do not trouble even to attend the auctions, but accept with a growl what the auctioneer sends them by next post.

Gates require close attention by the master. They should always swing freely, and as soon as there is the least necessity they should be rehung. With the shepherd's assistance (which the active farmer will always be able to control) and a bag of tools, he will be able to keep all gates in good order without any expense except for nails, screws, or an occasional new head or ledge.

Work on the Home Farm.

We ought to be hard at work with reaping, but the corn is no sooner dry after one shower than the clouds roll up again and everything is wet once more. As in the opinion of some of the old hands we are rather inclined to cut the crops in too green a state, perhaps the hindrances may be for our good. Self-binders are working very well when the straw is sufficiently dry, and, given dry weather, they will cut almost anything. The crops have stood the weather well and are no more storm-broken than they were a week ago.

The broken time has been partially filled by getting in a supply of steam coal which should have arrived before. The men have been trimming hedges and cleaning roadside ditches of the grass and rubbish which grows up and chokes them. A neighbour, having no straw, is using this material from the ditches to make standings for his corn stacks. He is a Potato grower. Another has Wheat straw to sell, but declines to accept 24s. per ton. He is not a Potato grower.

There are sinister rumours as regards the well, or rather ill, doing of lambs. Personally we have nothing to complain of, but there is a great demand for our friend the "vet" with his preventive and curative drenches. Those farmers who have nothing to fall back upon but unripe Turnips as alternatives to flushed pasture, will soon be in sore plight unless the weather changes materially. There is everything favourable to attacks of thread-worms (*strongylus*) in the windpipe. If the lambs are troubled with a tiresome and persistent cough, more especially at night, it is generally owing to the presence of this parasite. We have found turpentine and linseed oil the best antidote, but it requires careful administration. Each dose should be mixed separately, and to dose a large number of lambs it is well to employ three persons. Three small, narrow-necked bottles, holding two ounces, should be provided, into one of which one person should place a teaspoonful, and no more, of turpentine, another person should fill up the bottle with linseed oil, which should be well shaken and then handed to the third person to administer. This should be done with care and slowly, to avoid pouring any of the fluid down the windpipe into the lungs.

The land is so wet and the nights anything but warm, so young calves which have been lying out in the pastures would be safer in the shelter of a shed during the night. Prevention is better than cure.

ESTABLISHED 1832.

No connection with any other firm of a similar name.

Successors to the late BARON VAN PALLANDT.

ANT.
ROOZEN
& SON'S

SPLENDID

**HYACINTHS,
TULIPS,**

AND ALL OTHER

DUTCH, CAPE AND EXOTIC
BULBS & PLANTS

Our Descriptive CATALOGUE of the above, containing FULL CULTURAL DIRECTIONS and particulars as to FREE DELIVERY, will be sent post free on application to our Offices at OVERVEEN, HAARLEM, HOLLAND, or to our General Agents—

Messrs. MERTENS & CO.,
3, CROSS LANE, LONDON, E.C.

**STRAWBERRY
PLANTS.**

All the Leading Varieties from the open ground and in pots.

Priced Descriptive Circular Post Free.

DICKSONS Nurseries CHESTER

RIVERS'
FRUIT TREES,
ROSES, VINES,
FIGS, ORANGES,
AND
Orchard-House Trees.

A LARGE AND SELECT STOCK
ALWAYS ON VIEW.

ILLUSTRATED & DESCRIPTIVE CATALOGUE,
Post Free, 3d.

THOMAS RIVERS & SON,
SAWBRIDGEWORTH, HERTS.
HARLOW STATION, G.E.R.

R. D. Blackmore's PEACH—"LIBRA."

AWARD OF MERIT R.H.S.

Late mid-season; very large and heavy; average width 3 1/2 in., height 4 in., weight 10-11 oz. Apex depressed; lobe unequal; suture shallow. Skin of a beautiful rich creamy colour, daintily flushed with crimson. Fine melting flesh which separates freely from the stone; rich brisk flavour, and very juicy. Of the Seedling Peaches raised by the late Mr. R. D. Blackmore this is the one he selected for distribution to his fellow fruit-growers. It has already proved itself of great value to fellow the earlier and smaller varieties under glass. As soon as it becomes known it will be indispensable to market-men on account of its size, high quality, and its crimson and cream coloured skin, which is very distinct, and produces a goodly appearance.

Large trained Trees, with well-ripened fruiting wood, 31/6. Maidens, 21/-. Direct only from—

Will Tayler, Hampton, Middlesex.

1,500,000	BULBS.
Spanish Iris, Yellow, White, and Blue	7/6 per 1000.
Crocus, all colors	5/2 per 1000.
Sir Watkin Narcissus	5/2 per 100.
Horsfieldii	5/2 per 100.
Trumpet Narcissus	7/6 per 1000.
Glory of Leiden Narcissus	6d. each.
Madam de Graaff	3/2 each.
Sweet Scented Pheasant Eye Narcissus	5/2 & 7/6 per 1000.
Mixed Narcissus	5/2 per 1000.
Double Daffodils	5/2 & 10/2 per 1000.
Tulips, Mixed (choice)	2/2 per 100.
Single Lent Lilies	3/6 per 1000.
Snowdrops	5/2 & 7/6 per 1000.
Strawberry Plants	1/2 per 100.

Cross & Son, Nurseries, Wisbech.

LONDON FERN NURSERIES,

LOUGHBORO' JUNCTION, LONDON, S.W.—Stove and Greenhouse Ferns, large and small, in var., Aralias, Grevilleas, Cyperus, Ficus, Ericas, Palms, Dracenas, Aspidistras, Roses, Azaleas, Carnations, Crotons, Camellias, Chrysanthemums, Cyclamen, Bouvardias, Asparagus, Araucarias, Solanums, Aspidistras, Cinerarias, Genistas, Marguerites, Geraniums, Primulas, Orange Trees, &c. Trade, send for Wholesale List. Special Retail Catalogue, free.—J. E. SMITH.

Price 2/6; Post Free 2/7 1/2.

THE PINE APPLE MANUAL

By Contributors to the "Journal of Horticulture."

ILLUSTRATED WITH ENGRAVINGS.

Being a Guide to the Successful Cultivation of that Fruit, and to the Construction and Management of the Pinery.

Office: 12, MITRE COURT CHAMBERS, FLEET STREET, E.C.

TO THE TRADE!

DUTCH BULBS

FRENCH BULBS! and ENGLISH BULBS!

SEE OUR SPECIAL CATALOGUE OF BULBS.

Containing List of all the Best Varieties of HYACINTHS, TULIPS, CROCUS, LILiums, DAFFODILS, SNOWDROPS, IRIS, PÆONIES, &c., free on application. Please compare our prices before sending your orders abroad.

WATKINS & SIMPSON,

SEED AND BULB MERCHANTS,
12, TAVISTOCK ST., COVENT GARDEN, LONDON, W.C.

HEATING APPARATUS for Greenhouses and other Buildings. Catalogue free of all kinds of Hot-water Pipes, Wrought and Cast Iron Boilers, Radiators, Cisterns, Pumps, Baths, &c.—JONES & ATTWOOD Stourbridge.

THE GARDEN MANUAL: for the Cultivation and Operations required for the Kitchen Garden, Fruit Garden, Flower Garden, and Florists' Flowers. Illustrated with Engravings and Plans. By the Editors and Contributors of the *Journal of Horticulture*. REVISED EDITION now ready. Fcap. 8vo, cloth, price 1/6; post free, 1/9. * 44,000 of previous editions already sold.—Office: 12, MITRE COURT CHAMBERS, FLEET STREET E.C.

PURE WOOD CHARCOAL, Specially Prepared for Horticultural use. Extract from the *Journal of Horticulture*: "Charcoal is invaluable as a manurial agent; each little piece is a pantry full of the good things of this life. There is no cultivated plant which is not benefited by having Charcoal applied to the soil in which it is rooted." Apply for Pamphlet and prices to the Manufacturers—**HIRST, BROOKE & HIRST, Ltd., Leeds.**



Journal of Horticulture.

THURSDAY, SEPTEMBER 10, 1903.

Classification of Narcissi.



THE first and main object of all classification is to simplify the study of objects of interest in an orderly way, and to facilitate their recognition. With the botanical classification of the Daffodil or Narcissus we have nothing to do here, since the arrangement made by Mr. J. G. Baker in the

"Gardeners' Chronicle" of 1869 is still the best to employ in diagnosing the true or wild species. The first attempt to define pseudo-Narcissi from true Narcissi for garden purposes was made by Parkinson in his classical "Paradisus in Sole, or the Garden of Pleasant Flowers," originally published in 1629, or, say, thirteen years after the death of William Shakespeare, whom Parkinson long survived.

That a few additions to Mr. Baker's system are now considered needful is mainly due to the enormous strides made in the hybridisation and cross breeding of these beautiful Spring flowers by modern cultivators, and especially by the Rev. G. H. Engleheart, to whose industry and forethought nearly all the very finest and best of modern seedlings, and at least two of the distinct new sections, are due.

The two new sections at present to be provided for, as not coming under Mr. Baker's or Mr. Peter Barr's classifications, are, firstly, the Johnstonei group, or the hybrid offspring of N. pseudo-Narcissus and N. triandrus; and, secondly, the flat, or disc-crowned section, which Mr. P. R. Barr and myself propose should be called Englehearti, after their raiser, Mr. Engleheart.

In justice to the Narcissus Committee of the Royal Horticultural Society it ought to be stated here that when Mr. P. R. Barr and myself brought our proposed system of classifying Garden Daffodils before them at the Drill Hall meeting of April 14th, 1902, they, as

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

a body, utterly disagreed with it, scouted it, in fact as unworkable; and so far have merely acted as critics, without having suggested or, as a learned and corporate body of experts, produced anything better or more practical themselves. Neither Mr. P. R. Barr nor myself desired their adoption of our plan; we were, and still are, open to any new light on an intricate and complicated question.

At the exhibition of the Midland Daffodil Society, held at Birmingham two days later, April 16, the subject was again opened by Mr. Barr and myself at the dinner, on the eve of a long and busy day, when the classification here reprinted, with one or two alterations since made, was read by Mr. Barr, who, on concluding, said that the question was still in an evolutionary stage, but that he hoped before another season it might be brought nearer to some practical solution. It ought to be stated here, that before the subjoined skeleton plan of classifying Garden Narcissus had been read by Mr. Barr, Professor W. Hillhouse read a proposed system of his own, which contained many excellent points, but as it was really *de novo*, and ignored even the backbone of the system in use since 1869, to which growers, exhibitors, and others have become accustomed, it was felt that it could never be adopted in its entirety, although containing many excellent suggestions for a remodelling of an elastic and workable scheme. Professor Hillhouse's suggested system is published in this number, so that all interested may realise its importance for themselves.

It now followed that the speakers at Birmingham were really criticising two schemes or proposals instead of one, and, as usual under such circumstances and late at night after a good dinner, neither of the suggestions had justice done to them. In a word, I may paraphrase an old saying, "The way of those who propose the classification of the Narcissus is hard."

Mr. Engleheart said that all they could hope for was to pledge the producers of both schemes not to rush them through until they had a more favourable opportunity of discussing them. He, with more time to do so, felt that he should criticise both proposals, and he thought that they would have to mix up both, and run them into a much more simple form, before they would be of much practical use.

The Rev. S. E. Bourne followed, and said that there must certainly be some alteration in the old classification, but that care must be exercised lest they made confusion still worse than before. Mr. Bourne pointed out that Daffodils were now being grown in America, Australia, and New Zealand, and that it would not do for them to adopt a totally new system when all growers had become so used to the old one. He considered that a practical system was possible and workable, and that apparent difficulties must be boldly faced and overcome, and he considered that what Mr. Barr had proposed would form the foundation of a good and workable scheme. Mr. Engleheart observed that a working scheme or system was not impossible, but that, so far, the present schemes were, he thought, unworkable.

PROBATIONARY CLASSIFICATION OF GARDEN NARCISSI, AS SUGGESTED BY MR. P. R. BARR AND MR. F. W. BURBIDGE AT THE BIRMINGHAM DAFFODIL EXHIBITION AND MEETING, 1903.

N.B.—Species are printed in small heavy type, hybrid and garden varieties are shown in smaller type.

All doubts and disputes to be settled by actual measurement.

Group I. **MAGNI CORONATI, TRUMPET DAFFODILS.**

Distinguishing character:—Tube of flower as broad as it is long (except in the case of *Johnstoni*), and the crown or trumpet more than three-quarters as long or longer than the perianth segments.

- A. **AJAX OR TRUE TRUMPET DAFFODILS.**—(Ajax of Salisbury, Haworth and Herbert; **Pseudo-Narcissi**, of Parkinson).
 - (1) Yellow Selfs. *Example*—N. Maximus.
 - (2) Bicolors, with white perianth and yellow or primrose trumpet. *Example*—N. Horsfieldii.
 - (3) Silvery white and sulphur-white Selfs. *Example*—N. Cernuus.
 - (4) Doubles. *Example*—Telamonius Plenus.
- B. **JOHNSTONI** (hybrids of Ajax x *Triandrus*); tube of flower much longer than it is wide. *Example*—N. Queen of Spain.
- C. **BACKHOUSEI** (hybrids of Ajax x *Tazetta*, the seed parent being yellow or Bicolor Ajax). *Example*—N. William Wilks.
- D. **TRIDYMI'S** (hybrids of Ajax x *Tazetta*, the latter being the seed bearing parent). *Example*—N. S. A. De Graaff.
- E. **HUMEI**. *Example*—N. Hume's Giant.
- F. **CORBULARIA** (syn. *Bulbocodium*), the Hoop Petticoat or Medusa's Trumpet Daffodils, Self yellow, citron or white. *Example*—N. *Corbularia* Conspicua.
- G. **CYCLAMINEUS**, a species with abruptly reflexed perianth and remarkably shortened tube.

Group II. **MEDIO CORONATI, CHALICE CUPS or STAR NARCISSI.** Mostly hybrids, but including the two species **Triandrus** and **Juncifolius**.

- A. **INCOMPARABILIS** (Ajax x *Poeticus*).
Distinguishing character:—Depth of cup more than one-third to three-quarters the length of the perianth segments.
Example—N. *Cynosure*.
- B. **BARRII**.
Distinguishing character:—Depth of cup one-quarter to one-third the length of perianth segments.
Example—N. *Barrii* Conspicuous.
- C. **LEEDSII**, comprising the white and sulphur cupped *Incomparabilis* and *Barrii* forms with pure white segments. *Example*—N. *Minnie Hume*.
- D. **ENGLEHEARTII**, comprising the varieties with flattened disc-like crowns, which by measurement come under Group II.
Examples—N. *Egret*, N. *Astrardente*, &c.
- E. **MACLEAI AND NELSONI** (hybrids of Ajax x *Tazetta* or Ajax Bicolor x *Poeticus*).
- F. **BERNARDI** (hybrids of *Abcissus* and *Variiformis* x *Poeticus* and intermediate between N. *Incomparabilis* and N. *Nelsoni*).
- G. **ODORUS** (hybrids of Ajax x *Jonquilla*). *Example*—N. *Olorus* *Rugulosus*.
- H. **Triandrus**, a species with abruptly reflexed perianth. *Example*—N. *Triandrus* *Albus* (Angel's Tears).
- I. **Juncifolius**, a rush-leaved species with widened crown.

Group III. **PARVI CORONATI.** Short and small-crowned Narcissi.

Distinguishing character:—Depth of cup less than one quarter the length of perianth segments.

- A. **POETICUS OR TRUE POET'S DAFFODILS.** *Example*—N. *Poeticus* *Ornatus*.
- B. **BURBIDGEI**, hybrids of N. *Incomparabilis*, *Barrii*, and *Leedsii* x N. *Poeticus*. *Examples*—N. *John Bain* and *Falstaff*.
- C. **TAZETTA**, bunch or cluster-flowered Self yellows, bicolors, whites, and doubles; also N. *Schizanthus orientalis*.
- D. **HYBRIDS**, *Tenuior*, *Gracilis*, *Intermedius*, *Biflorus*.
- E. **Species**—*Dubius*, *Serotinus*, *Elegans*, *Viridiflorus*, *Pachybolbos*, *Canariensis*, *Broussonetti*, &c.
- F. **Jonquilla** (a species), rush-leaved, golden-flowered, very fragrant.

As I have already said, there are two distinct new sections, viz., *Johnstonei* and *Engleheartii*, to be provided for, and this has been done by Mr. P. R. Barr and myself in our scheme, which retains all the old divisions as proposed by Mr. Baker, in 1869, and Mr. Peter Barr, in 1884, after the first Narcissus Conference of the Royal Horticultural Society. Our plan is also elastic, and may be made to include new sections when modern raisers of seedling Narcissus succeed in creating them. By publishing the two plans (as proposed at Birmingham) in the *Journal of Horticulture* an opportunity will be afforded to a wide circle of Daffodil specialists and breeders to note their objections; but it is desirable that in criticising our scheme something better should be proposed in place of whatever may be objected to, and in this way something really workable and trustworthy will be gained worthy of general approval.

As Professor Hillhouse pertinently observed at Birmingham, a natural or genealogical classification for garden seedlings is impossible, "hence classification must be essentially artificial, and determined by convenience and elasticity." Mr. Barr and myself had already and quite independently arrived at the same conclusion, hence the suggestion that actual measurements should be relied upon in all cases of doubt or indecision at public exhibitions of these flowers.

I am deeply indebted to the very excellent fifth annual report of the Midland Daffodil Society for its careful reprint of the proceedings as to classification and the discussion at Birmingham in April, 1903.—F. W. BURBIDGE, M.A., V.M.H.

For the accompanying illustrations our thanks are due to Messrs. Barr & Sons, London.

PROFESSOR HILLHOUSE'S PROVISIONAL SCHEME FOR CLASSIFYING GARDEN NARCISSI. PROPOSED AND READ AT BIRMINGHAM MIDLAND DAFFODIL SOCIETY'S SHOW, APRIL 16TH, 1903.

Professor Hillhouse introduced a paper for discussion on the classification of the genus *Narcissus* for horticultural purposes. In the course of a very learned and technical paper, he dealt with the general character of the genus, its habitat and geographical range, and referring particularly to it as a polymorphic genus, with very numerous natural hybrids, and like *Rosa*, *Rubus*, and other genera, not yet settled down by evolution, i.e., is probably in a developmental state. Hence classification must be essentially artificial, and determined by convenience and elasticity. There were, he said, two fundamental types of flower, (a) the large corona, six stamens of equal length, arising from near the base of the tube; and (b) the small corona, six



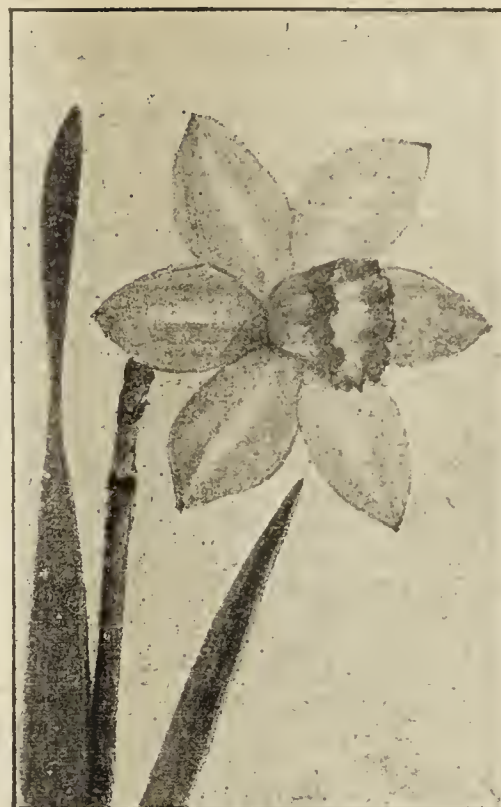
Daffodil, or Trumpet Narcissus.
I.—MAGNI-CORONATI, section of Baker.

stamens of unequal length, three arising from nearer the top of the tube than the others. Then there was an intermediate type of flower, perhaps partly natural (that was to say its sources were very remote) as for example: Triandrus, Jonquilla, but probably mainly recent hybrids between (a) and (b), e.g., *N. incomparabilis*. There were two types of leaf, flat and rush, also with an intermediate type. Natural garden hybrids also very common, for the earlier growers did not artificially hybridise (cp Parkinson's list and figures, 17th cent.). Referring to Baker's Classification in three groups, the Professor said the general lines were still adapted for use, but perhaps it was

—Bicolors, or nearly selfs (to include Bernardi, Leedsii, montanus, Mac'eii, and Nelsoni—the former perhaps only a dwarf form of the latter—and Tridymus). B3. *Flore Pleno*.

C. *Parvi-corona*—Saucer-crowned Daffodils. The natural species of horticultural value included in this group are *N. Jonquilla*, *Poeticus*, and *Tazetta*. C1. *Burbidgea*. C2. *Engleheartea* (including varieties of *Poeticus*). C3. *Jonquilla* (to include *gracilis* and *tenuior*). C4. *Polyanthus* (to include *biflorus*, *schizanthus*, and *Tazetta*).

He suggested that if the disposition were towards a more revolutionary treatment of the genus, and the relative lengths of tube



Hybrid Chalice Cups, or Star Narcissus.
II.—MEDIO-CORONATI, section of Baker.

a pity that he did not standardise the comparative lengths of tube and corona, instead of perianth and corona. The internal subdivision of these groups was now too complex and inelastic. With intercrossing and recrossing every gradation of form was, or might be found, and form could not be defined in sufficiently rigid terms; as for example, how to exactly state the difference between *Incomparabilis* and *Barrii*? In his attempt at rearrangement, a few new names had been introduced. Amongst Daffodil enthusiasts, six names stood out pre-eminent—Backhouse, Herbert, Leeds in the past, Barr, Burbidge and Engleheart in the present. Those six names he had utilised, associating each, as far as practicable, with an appropriate group, and to avoid confusion where the name had been used before, he had given it a new ending. The Professor then stated his scheme of Classification as under: A. *Magni-corona*—Trumpet crowned Daffodils (*Corbularia*, *Ajax*, and *Ganymedes* of Baker, and of Pax). A1. *Corbularia*—*N. Bulbocodium* and its vars. A2. *Backhousea*—All yellow selfs, or nearly selfs (to include *Humei* and *Backhousei*, both generally included in *Medii-coronata*). A3. *Herbertea*—Bicolor, or white, or nearly white, selfs. A4. *Triandrea*—(to include *Cernuus*, *Johnstoni*, *Cyclamineus*, &c.) with reflexed perianth segments, probably all hybrids of *N. triandrus*, and having its character. A5. *Flore Pleno*.



Poet's Narcissus, or Small Crown Narcissus. III.—PARVI-CORONATI, section of Baker.

B. *Medii-corona*—Chalice-crowned Daffodils. With the exception of *Odorus* and *Juncifolius*, all the varieties in this group are probably hybrids, and as such I count also *N. Incomparabilis* of Baker's Classification. B1. *Barrii*—All yellow selfs, or nearly selfs (to include most *Barrii*, *incomparabilis*, *N. Juncifolius* and *Odorus*). B2. *Leedsia*

winter months. The fruit is grown in the Tigre district of Argentina, the centre of the Peach market. At the junction of the Tigre River with another stream suitable land is purchased for the erection of store-houses, where fruit will be placed ready for export.

Arrangements have been made with the Buenos Ayres and Rosario Railway for the carriage of the fruit to the capital, where it will be transferred to the steamers for Southampton, and railway sidings are run right along the sheds. Contracts have been entered into with the Royal Mail Steam Packet Company for the erection of cold storage chambers on their boats and the conveyance of fruit therein to England.

A New Winter Fruit Supply.

Despite the failure of the crop, we are to have an unusual quantity of dainty fruit offered this winter, and "Lloyd's" is able to announce a new departure in the trade, which will put an hitherto unattainable supply on the market. Some 50,000 or 60,000 cases of assorted Peaches, Plums, Pears, Apricots, and Asparagus will be sent to England from the Argentine Republic, commencing to arrive at Covent Garden in January, and continuing to do so through



An example of the Englehearti section.



N. Johnstonel Queen of Spain.



Spray of Double Tulips.

S. & S.

Forcing Home-grown Daffodils.

When there exists a large quantity of roots in the garden and shrubbery borders, a feeling may pardonably arise that some of these would do greater service lifted and forwarded into earlier bloom, and thus afford a means of giving a greater touch of colour at some particular time in the conservatory or show-house. For cutting, it may be said these would serve to relieve the better class stock of purchased roots, and thus reserve these latter for pot-grown purposes. This they do most conveniently, but particularly is this true of late winter and early spring, before the outdoor stock supply the flower basket. What I have found in these home-grown roots is that they require more time between the lifting, potting, and the starting them into growth, unless, of course, they have been prepared by enforced ripeness and rest after the foliage has died down naturally, and they are lifted for the purpose.

Brought-on-in batches at early forcing time, we have found those first introduced into heat to be somewhat stubborn and sulky, and are content to allow the later lots to outstrip them in time allowance. This cannot be other than disappointing, if it does not favour a loss in time. Naturally there is not the ripeness of the bulb which favours the Dutch grown; soil and climate would aid that desirable maturity, but for later use, and attempts to unduly force them abstained from, there is no reason why home-grown roots should not do good service.

True, it is not in every garden where they grow in that profusion and vigour to justify their disturbance for gentle forcing; but there are some cases, at any rate, where this is so, and afford so good an accessory to the annually purchased stock. The double *Narcissus Telamonius plenus* and *Spurius* are both free in growth and flower, and are easily forced. Ard Righ, Trumpet major, and poeticus ornatus are others that adapt themselves to this practice.

In the rather stiff soil of our lawn borders the double Daffodils and some others grow with such freedom that in a few years a single root produces great clumps, which at flowering time give two to three dozen blooms of fine substance, colour, and size.

Some of these can be lifted and well spared, and providing that only a clump here and there are lifted and sufficient replaced in the same station for a future stock, the border display loses but little of its spring effects in floral grandeur. When required only for cutting purposes they may be more easily grown in boxes made in any convenient size, and from 2½ in to 3 in deep.

Those who cannot afford to purchase bulbs for naturalising can use these box-grown bulbs, though it cannot be said they are so successful as are imported roots.—W. S.

Cooks.

By the Man who serves the Kitchen.

Though I ain't bin a riter for a very long time, Mr. Editer, I'm a reeder o' long standin', and in the whole coarse o' my hexperience I niver remember seein' a harticle in th' Jernel under the above headin'. Now, in diskussin' my literary hefforts with my old woman, she has made a great point o' me bein' oriernal, becos as she said to me: "Jim," said she, "a author as ain't oriernal is no class, and if your name is ter go down ter posterity along wi' that o' Shakespeare and Dickens you must strike a line o' yer own, or these 'ere gardeners, who has a mighty opinion o' their own ritin', ull swear your copyin' 'em."

"Right," says I, "and can yer account for nothin' ever appearin' in th' Jernel about cooks, considerin' as they has to do wi' th' vegetables as th' gardeners grow?"

I may say that afore she went in ter partnership along o' me th' missus was a cook, and I thought she could throw some light on th' question.

"Yes, Jim," she said, "theer's two very good reasons. Either Mr. Head Gardener doesn't like th' reedin' publick to know as he's on a level wi' the cook, or else he's afeerd o' sayin' summat as ull bring that lady down on 'im; but as long as I'm heer to defend you there's nothin' to fear; only remember that you say nothin' about me, or there'll be a shindy, I promise you. So now you can go on with yer subject."

Perhaps this explernation meets the case; but still it's a bit of a puzzel to me that while reems o' copy has bin turned out about vegetabels and gardeners as grows 'em, there's bin a strange silence over th' party wot prepares 'em for table. Yet cooks and gardeners is inseperabel. Wi'out cooks there'd be no gardeners, becos there'd be nobody to boil th' taters w'en th' gardeners 'ad grown 'em; and if there were neither cooks nor gardeners there'd be non' o' those delightful little rows wot does so much to releve the monotony o' gentleman's places.

Now, bein' a kitchen garden man, I perless to know a bit about cooks, and it's my proud boast that if theer's any chap on this bit of a mudbank (as th' Amerikans call our proud little island) wot knows 'ow to work 'em, that man's your humble servant. In my time I've 'ad the privileg o' servin' fat cooks, lean cooks, tall cooks, short cooks, old cooks, young cooks, teetotal cooks, and cooks as drank. I've bin brought inter contact wi' maiden cooks, and cooks as wos widders, cooks as perlessed to despise men, and cooks as would ha' fainted wi' delight if some chap had a hofferred to a married 'em. I served a man cook for a bit once, but he were a Frenchman (Froggy, we called him), and had a bit of a temper. That wouldn't ha' mattered so much, but one mornin' he knocked th' butler down wi' a fryin' pan 'cos th' butler told him as Boney was licked at Waterloo afore Blucher came up, and in consequence o' this little devarshion he got a month's notis, th' butler bein' an old servant, and mighty particular about givin' a drop o' beer away, which wos considered to be a fine trait in his karacter by th' missus, who wos a great adverkate o' temperance.

Now, th' cook as comes nearest to perfeckshon, accordin' to my way o' thinkin', is a fat 'un; the fatter th' better, becos the superflews amount o' flesh (or fat) she carries pervents her from worryin' either herself or anybody else. A fat cook is rarely 'ard on a chap. If you happen to be a few minits late wi' th' vegetabels in a mornin' she measures

your pace by 'er own, and makes allowances, and th' only time w'en she wants a bit o' workin' is in th' summer time, when th' jam makin' is in full swing; and I put all that down to th' heat and sweat.

I'm allus a bit suspishous about a cook as is extra haffable, for you may depend she's got summat in view. We had a head gardener once who was a bachelor, and in th' kitchen at the same time there was a cook as wanted a 'ome. Lor, the messages that woman used to send out by me, summat like this: "Complements to Mister S—, and many thanks for th' Mushrooms he sent in this mornin', which was lovely." I didn't see through it for a bit, but I got suspishous when she took ta runnin' up th' garden herself for little sprigs of Parsley, and in the end she got her 'ome in th' gardener's cottage.

There's nothin' on earth so changeable as cooks, and w'en they don't stop in a place more than three months they causes no end o' trouble. Fust there comes one as wants all big vegetables, big Onions, big Tatars, and so on, and I does my best to please her. Well, she leaves, and there comes another who wants little vegetables; and arter I've bin to no end o' trouble in growin' a 2lb Onion, I find it in th' pig tub, arter it's bin kicked all over th' kitchen and done one little jerney in th' direction o' my head. It's very 'ard, this sort o' thing is, but it's only one o' th' troubles that falls to the lot of a man who follows the honered perfession of a kitchen server. Once we

had a cook as was a mark on Spinach; and after we'd planted about half th' garden with it, she left, and another came as wouldn't look at Spinach. So it went to th' pigs, and in due coarse th' 'ousehold had some Spinach fed bacon. So yer go on; one cook wantin' one thing, and another wantin' summat else. It don't seem to matter much wot th' missus wants, for th' cook gets her own way in th' end, and if th' head gardener wants any peece o' mind th' best thing he can do is to humour her.

Mind you, I've no intenshon o' bein' 'ard on cooks in general, cos I've served some good 'uns; and bein' a man o' some corporation myself, it's whispered in th' pottin' shed that th' distance round my waist is due in a meshure to the little odds and ends wot 'as bin dropped inter my empty vegetable baskets from time to time; but, as Kiplin' 'ud say, that's another story.

The relashions between cooks and head gardeners is very strange. When the latter is out among his friends he talks about what th' master likes and wot th' missus is pleased with, and he leaves th' cook out o' th' question; but when he's at 'ome he's continually botherin' me about takin' in just wot she wants, and is partikally anxious w'en I go in fer orders in th' mornin' to know the state o' the old woman's temper, though he never appears to trouble much about her 'ealth.

Still, it's a sublime thing to see a cook and a gardener on friendly, not to say lovable terms wi' each other. It gives you a soort of a insight inter that glorious time as is promised us when th' lion and th' lamb will lie down together, and th' soard will be turned inter a reapin' hook (though I don't see wot good it ull be, considerin' as reapin' macheens is all the go now). I say that any gardener as can live for a year in a place wi'out once offendin' the cook ought to be moved from his spheer and be put inter th' Cabinet, for his deplomasy is lost in a garden, and ort to be employed in th' welfare of his country. With a fat cook to deal with such a thing is possible, but not probable; but wi' a thin cook or a widder such a state of affairs is too much to expect.

Wo be also to the poor kitchen serving man when cook and gardener are at daggers drawn. His lot is wus than that of a felon, 'cos th' gardener blames 'im w'en th' cook grumbles, and th' cook says things to 'im about th' gardener which he dursn't repeat, afeerd o' losin' his place; so he is like Mr. Pickwick, a soort of a shuttlecock; but instead o' two lawyers bein' the battledoors, they are a cook and a gardener. I've bin so hard pushed at times in this respect that I've sighed for sum geenus to invent a hortomatik cook as

you could wind up in a mornin' and leeve her to run on silently till night; but she ain't forthcomin' yet.

I've only one more word to add, Mr. Editer (so keep your blue pencil in yer pocket), which is this. They tell me as th' lady gardener is comin' along; and it's only a question o' time when all th' establishments in th' country will be kontrolled by female head gardeners. It's also said that th' cooks o' th' future will not be ordinary cooks, but lady cooks; and though I'm 'opin' as this state of affairs won't be real till I've 'anded in my checks, if it does cum about in my time I shall retire from my present sitiuation, and vote for female kitchen garden men (that sounds Irish, but you know wot I mean) and lady kitchen servers.

NARCISSUS, SULPHUR PHOENIX.—Either in grass, in borders, or in pots, the double Daffodils are seen to great advantage; and Sulphur Phoenix, otherwise "Codlins-and-Cream" (*N. incomparabilis plenus* var.) is one of the best. Messrs. Webb's block shows its effect used in a vase.

A SPRAY OF DOUBLE TULIPS.—The Tulips are amongst the flowers that seem lovelier in the double than the single state, others being the Chrysanthemum, the Carnation, and the Rose. But double Tulips are far too little enjoyed, while singles are found everywhere. They like a warm border and porous soil. The illustration from Messrs. Sutton will serve to emphasise our note.



Narcissus, Sulphur Phoenix.

Webb & Sons.



Chrysanthemums at Earlswood.

During a visit to London the last Saturday in August, I could not resist the temptation to journey and see what Mr. Wells had in the way of 'Mums at Earlswood. I found him at home, and his greeting was characteristic: "Well, what have you come to see? Big Mums?" I said, "Yes," and he replied, "Well, we have none here." The key to the mystery was that the plants are at the new nurseries he has acquired at Merstham, which formerly belonged to Mr. Ross.

After a cup of tea, a friendly dogcart soon landed us at the new place, which is situated halfway between Redhill and Merstham. It is an ideal spot for Chrysanthemum growing; open and well situated, comprising in all $4\frac{3}{4}$ acres, with plenty of glass. The chief houses are: one 126ft by 36 $\frac{1}{2}$ ft, another 150ft by 20ft, a third 107ft by 17ft, and two 100ft by 20ft, besides several smaller houses. There are about 2,000 plants grown for big blooms standing on concrete lines, 7in wide and 4ft apart.

Amongst many fine plants the following were particularly striking: Salter's Favourite, a new one of Mr. Pockett's strain, with the most distinct foliage I ever saw. The leaves are almost as round as the leaves of a Brussels Sprout. The colour of the bloom is said to be rosy cerise. J. H. Doyle, named after the winner of the Melbourne Gold Medal, April, 1903; Mrs. H. A. Allen, another Australian with a big reputation; Mrs. J. Wells, a new crimson; and many more new varieties under letter and number.

Of the varieties in commerce of recent introduction I found Donald McLeod, F. A. Cobbold, Leila Filkins, Maynell, Mrs. F. W. Vallis, S. T. Wright, W. Duckham, F. S. Vallis, Pantia Ralli (incurved), Silsbury's Terra Cotta, and Yellow Nellie Pockett, all most promising.

Mr. Wells cultivates early flowering varieties largely, and has something like 24,000 plants growing in the open ground, many of which were in bloom, amongst them being Horace Martin, a grand yellow; Roi des Blancs, a long-petalled white; Gertie, a beautiful bright yellow; Kitty, a bright rose; and Madame Marie Massé and its various sports were making a brave show. Goacher's Crimson is also very fine and free flowering. La Parisienne, a quite new, creamy white; Champ de Neige, another new white; The Champion, a new yellow of Mr. Goacher's raising, not yet in circulation, but most fitly named. Mytchett Pink seems a good pink variety; and Charlie is a fine creamy sort.

I was very much struck with a new method Mr. Wells has adopted for raising stock plants. He has six plants of a variety placed out in boxes about 3ft by 2ft by 6in deep, which can be lifted under cover later on, and should ensure good healthy cuttings. I came away very pleased with my visit, and am sure all his many friends will wish Mr. Wells success in his enterprise.—A. H.

Gadding and Gathering.

Henry Eckford's Nursery at Wem.

It was on the eve of the recent Shrewsbury Show that four of us hied out to Wem from the Salopian capital. Favoured with sunshine after showers, the visit was of the most pleasant nature, and the ten acres of Sweet Peas and culinary varieties, were still fruitful of beauty and interest. Here we were in the home-centre of the English Sweet Pea, the place from which Henry Eckford sent his earliest cross-breeds, from Bronze Knight onwards, with which he commanded the attention of the floricultural world, and has never yet been outstripped in his own line of flower breeding.

On every side, Peas—the odorous *Lathyrus* in a hundred colours, and many heights, but all generous in their gift of blossoms, and sweet in every instance. Mr. Henry Eckford does not now labour amongst his favourites, for the burden of eighty years begins to tell upon him, yet how hale and hearty does he appear! And he can tell stories of other and far back days with the keenest zest, and laugh joyfully at the tales of "the boys." Long may he continue to!

From among the acres of Sweet Peas, one, a new one, stood out most tellingly by its splendid form and colour. This was Scarlet Gem, of which there is a goodly stock, and this variety received a first-class certificate from the N.S.P.S. in the summer. Truly it is one of the finest sent out during the last dozen years. Other newer varieties already known, however, and which comprised Gracie Greenwood, Jeanie Gordon, Lord Rosebery, and Mrs. W. P. Wright, were in fine condition even thus late. Dry weather was much wanted for seed harvesting.

Along the edges of the herbaceous plant borders the beautiful cup-like flowers of the white Evening Primrose (*Oenothera speciosa*) were in great profusion, and furnished a neat as well as choice edging.

Occupying fully half an acre of ground by themselves were the Pansies and Violas in a host of named varieties, the strain being of high merit, with plenty of good flowers and a fine habit of growth.

The culinary Peas and the Beans, both of which are largely cultivated, the Peas amounting to acres, were ripening their pods, so that comparisons of varieties could not then be made.



J. V. & Sons, Ltd.

Fritillaria meleagris.

The variety Record was, however, worthy of special attention, carrying as it does ten peas in the pods, large in size, and rich, marrow flavour. Prior is one of the parents. Memorial, The Bruce, The Gladstone, Dwarf Monarch (a heavy cropper, with large, well-filled pods), and one named Royalty, with very even, straight pods, each well filled, and plenty of them—these were a few noted in a quiet walk through the main portion. The Tomato houses afforded views of heavy crops, and in every department of the nursery the stock looked well.

Mr. John S. Eckford, the only son of the founder of the business, and who now manages it, will ensure its continued lead in the Sweet Pea line by reason of his calibre and care.—WANDERING WILLIE.

FRITILLARIAS.—A considerable difference exists betwixt the Crown Imperial of stately mien and the "Chequered Daffodil" which we figure on this page, and which luxuriates so uncommonly well in the meadows near Oxford. The *Fritillaria Meleagris*, or Snake's Head Lily, flowers in April and May; and anybody visiting Kew during that time will see how effectively it appears beneath the early flowering shrubs, or mixed with Primroses and vernal Irises. Nor is it hidden, lost, or useless in long grass with Daffodils, for there the perfect beauty of the flowers are seen at their best, as nearly all bulbous flowers are. The rose-mauve of the pendant blossoms are half buried in the green enswathing, and one sometimes has to wonder what the pinky heads are, just peeping beneath the Daffodils. But they are of divers shades, some pale tea, others purplish or faded magenta and prettily chequered, and all are worthy of culture. The illustration is kindly lent by Messrs. J. Veitch and Sons, Limited.



Lime, Sulphur, and Softsoap Wash for Gooseberries.

If this note reaches the eye of the writer of a letter which recently appeared in the *Journal of Horticulture* or some other paper, recommending a wash of lime, sulphur, and softsoap on Gooseberry bushes, to prevent birds from destroying the buds, a brief repetition of the recipe will greatly oblige.—FRUIT GROWER.

Inarching Vines.

"D. C." writes further in reference to inarching varieties of Grapes, that his object "is simply to extend the Muscat of Alexandria by inarching them on Gros Colman, which do not thrive under the treatment for Muscats." Continuing: "To save time, I tried the inarching; but someone told me it was doubtful if Muscats would succeed on Gros Colman stocks. If that is so, my little transaction is abortive."

Shrivelling of Muscats.

If my theory is correct, shrivelling will be more than usually prevalent this season. It arises from a lack of solid material in the berries, and more especially in the early stages of their growth. The want of sunshine this season will considerably aggravate the evil. It is not at all too early now to begin taking precautions to prevent the same thing occurring next year.

I will presume that the borders have been fed with all that is desirable for them. If not, they must not now have anything in the shape of nitrogenous feeding till the fruit is cut. Potash and superphosphate would not be likely to do any harm, and nitrates, which are quicker in action, can be added later, so long as there is healthy foliage remaining. Every effort should be made to keep the foliage healthy, especially the older portion of it near the base of the stems where the buds are situated for fruiting next year.

There are still some people who keep up high night temperatures, and this in my opinion is one of the great causes of shrivelling. Muscats do not want it any more than other Grapes. If they are required early, start them early, for you cannot make up lost time by roasting them. The beginning of February is not too early to close the house if you want Muscats coloured in August. In order to secure the greatest possible amount of root action in proportion to the top, one should proceed very gently till the flowers open, which will be about the middle of April, and even then there is no need for high temperatures, 55deg minimum is quite high enough. I have nothing to say against high sun temperatures with ample ventilation at this stage, and when there is no sun, fire heat should be used sufficiently to dry the pollen by the middle of the day.

Now, if you would prevent shrivelling, and secure early colouring, the bunches must be exposed to the light as soon as they are formed. In the first place the rods should not be less than 4ft apart, the side branches should not be less than 1ft apart, and 18in would be better. Any branches which have the fruit removed from them might be lowered somewhat by tying them to stakes inserted in the border or other ways which suggest themselves, and sometimes the bearing branches can be raised by putting a tack in a rafter and slinging them up. Treated thus the berries will never assume that very dark green we often see when they are grown in the shade.

Of course there is some risk of scalding when the fruit is thus exposed, but this can be reduced to a minimum by keeping the temperature down to 80deg during the latter portion of the stoning period. A little shade may be necessary for about a fortnight at this stage, but this season none at all was wanted. When the second shrivelling commences a higher sun temperature is very beneficial.

As the Grapes shown by me at Bath were favourably commented on by your reporter, and many questions were asked as to how Muscats could be coloured in such a season, I state here as much as I can think of wherein my treatment is likely to differ from that of other growers. My Muscats were below 50deg more than once when flowering, not for a want of heating power, but it was difficult to regulate it in a small house, 27ft by 15ft, with a powerful boiler, and I had rather have it at 50deg at night than 70deg. That a high temperature was not employed

at any time is proved by the fact that Madresfield Court, coloured jet black to the footstalk, was shown from the same house at the same time.—WM. TAYLOR, Bath.

Floral Arrangements.

The note on this subject on page 214, together with the illustration in another column, will, I trust, tempt some of our exhibitors to forward notes upon the arrangement of bouquets in their several forms. I have no doubt information would also be acceptable to many anent sprays and buttonholes. One cannot help remarking in this connection that no amount of information nor practice will avail in making some persons expert in the art of bouquet making; but nearly everyone can greatly improve upon first efforts if care and attention only be given, added to observance of the best specimens of the work of some of our leading exhibitors.

Generally speaking there has been an advancement in the direction of greater looseness and freedom in the building of bouquets. At one period I thought the shower arrangement in danger of developing into a faggot of ribbons and blossoms, but there appears to have been latterly a sensible check to mere "largeness." The old practitioner felt compelled to have his stick for the centre of his bunch of flowers, with moss or wadding to pad them in position, with these and wire constructing a semi-globular head more or less stiff. Matters are better nowadays, it is true, but even in the illustration mentioned above, which at first sight appears light and graceful enough, there seems on closer scrutiny a tendency to central "massing."

It may be my fastidious fancy, but to me a bouquet of flowers appeals best as a mere handful of blossoms, each as choice as possible of its kind arranged without jostling its neighbour, with (and here we have a matter for the exercise of some judgment) just a sufficient dressing of foliage and no more. Wires we shall never be able wholly to dispense with, as scarcely any flowers can be made to stand in the required position without support; besides, when wired, each can be manipulated by the operator with greater ease.—DECORATOR.

The Fruit Crop in Ireland.

Our occasional correspondent, Mr. W. J. Murphy, Clonmel, has sent the subjoined note to the Dublin "Freeman's Journal," 2nd inst.:—

"I read your sub-leader referring to Mr. Morgan's views on fruit culture and modern methods to ensure success in this day's 'Freeman,' and as I take much interest therein, I ask your permission to draw attention to this year's deficient supply, and to ask the cause thereof. I have carefully read Mr. Morgan's articles in the Limerick 'Munster News,' and can find no elucidation of the abnormal state of the outdoor fruit crop this year. I have a walled-in town garden fairly stocked with Apples, Pears, Plums, Cherries, Peaches, Apricots, and Nectarines on south wall. The crops, especially of Apples, have been uniformly good for the past eight years; the trees are young dwarfs, and have been regularly pruned and carefully washed with the garden hose, while the soil is of that calcareous formation that suits Apples specially. Yet the crop this year is only a fraction of all former years—practically no Plums or Pears. Mr. Morgan might urge that if the trees were grown in the open, and in loamy soil, with a good aspect, success would be more certain. Well, I cannot agree with that. The hon. secretary of the Kilkenny Agricultural Society has an orchard of several acres, just such a soil and aspect, and for which he obtained a special prize—the varieties being of the choicest—and this year the result is no better than mine. I have just been through the Cork district as far as Clonakilty, and to find the same result general—no fruit this year. It would be very important if you invited expert opinion as to why there has been a general failure of the fruit crop this year. From what I have said you will see it is not soil, location, varieties, nor want of proper treatment. I have thought over the matter myself, and without pretending I can elucidate the result, I think the unsatisfactory state of things is greatly owing to the absence of sunshine, and the consequent imperfect ripening of the wood. If this be so, next year's crop will be no better.—W. J. MURPHY, Clonmel."

PUBLICATIONS RECEIVED.—"Purification of Residuary Waters. Automatic Eupuration by Vial's System." 38, Rue de Trèves, Brussels. * * "Holidays in North Germany, including the Hartz Mountains." * * "The Journal of the Department of Agriculture of Victoria," July, 1903. * * "Co-operative Forage Experiments in Southern Victoria," by E. J. Howell, Ph.D., Dept. of Agriculture, Victoria, Bulletin No. 6. * * "Two Years' Field Work of the Chemical Branch of the Department of Agriculture, Victoria." * * "Woburn Fruit Farm Experiments, Third Report, 1903." Eyre and Spottiswoode, 1s. 6d.

Ancient and Modern Daffodils.*

When Daffodils came into fashion in 1884, the subject of a popular name was much debated. *Narcissus* is the botanical name for the entire family. Daffodil, strictly speaking, applies only to the trumpet section. Some individuals spoke of them as Daffodils, while others named them *Narcissi*, and frequently the same speaker would use both terms. Others, again, would refer to the trumpet section and its hybrids as Daffodils, and to the poeticus section as *Narcissi*. A "sort of" compromise was arrived at so as to avoid confusion, and now all sections of the *Narcissus* are generally called Daffodils.

The earliest recorded reference to Daffodils was by Theophrastus, of Eresus, about B.C. 300. Homer and Sophocles both wrote of the Daffodil. The former, in his hymn to Demeter, speaks of the Daffodil thus: "The noble *Narcissus* wondrous glittering, a noble sight for all, whether immortal gods or mortal men, from whose root a hundred heads spring forth, and at the fragrant odour all the broad heavens above, and all the earth laughed and the salt waves of the sea." In 1888 during some excavations in the cemetery at Hawara, in Egypt, some floral wreaths were found, one of which consisted of the Bunch-flowered Daffodil, and is supposed to have been made by a Greek artist resident in Egypt about the first century before the Christian era.

There is some doubt as to the species of Daffodil referred to by the early Greek and Roman poets in their writings, but it is generally accepted to be poeticus, or what we now call the Poet's Daffodil. There can be no doubt as to the flower referred to by Homer in his hymn to Demeter. The Bunch-flowered Daffodil alone would give the hundred heads and the fragrance named.

Shakespeare's "Daffodil that comes before the swallow dares, and takes the winds of March with beauty," is the Daffodown-dilly or Lent-lily of English copses and meadows. In 1597 it is said there were twenty-four species of Daffodils cultivated in London gardens. In 1629 John Parkinson published his "Paradisus Terrestris in Sole; or A Garden of Beautiful Flowers." At that time there appear to have been many Daffodil amateurs, as he states there was much confusion amongst the names, and so undertook the task of setting the family in order. Those who may have access to this old book will find many quaint remarks and criticisms on the names of Daffodils.

Parkinson records nearly one hundred sorts, but since the advent of Linnæus, many so-called Daffodils of pre-Linnæan times have been put into other families. From Parkinson's day to the early part of the nineteenth century it may be said little or no progress was made in Daffodil lore. There were, however, many gardening books published between 1629 and 1800, but none of them added to Parkinson's list. Hales, it is true, gave a woodcut of one he called "Silver and Gold," which we now recognise as *N. scoticus plenus*. Some curious theories were, however, propounded on the making of double Daffodils, all of which may be safely called nonsense.

Double Daffodils, as far as I can make out, originated in a wild state, but when, and where, and how, are unsolved questions. No one in modern times has added a double Daffodil to the existing ancient forms; indeed, I am not quite sure that we know as many double Daffodils as Parkinson cultivated in his garden in Holborn, London. Some names of double Daffodils have been changed, it is true. But a change of name does not make a new flower. Let us examine what is known of some of the double Daffodils in a wild state.

The big double yellow Daffodil (*Telamonius plenus*), of Haworth, is found in Italy, with its single varieties *Telamonius*, now called King Umberto, and *Princeps*. This latter is one of the most common and free flowering, and in the spring the flower-boys of Melbourne, Australia, sell it by the million in the streets. These three have been gathered wild for me in the valley of the Arno, Italy. Of the Daffodil of Shakespeare, its double form grows on the Isle of Wight plentifully, and sparsely in many other parts of England. The double form of the Scotch Daffodil has been found in Holland, along with its single form. A double Daffodil is found growing along with the Tenby Daffodil in Denbighshire. The Gardenia-flowered double poeticus comes from the wild English poeticus. The double "Butter and Eggs" grows with its single form in the Landes, France. "Codlins and Cream" is a double form of semi-partitus. "Eggs and Bacon" I would suggest is a double form of *Bernardi*, a hybrid found on the mountains above Luchon, in the French Hautes Pyrenees.

There is a beautiful reversion from "Eggs and Bacon" now known as Mary Anderson. In my travels I found a double variety in Spain of *Pallidus præcox*. There is a double form of the small sweet-scented Jonquil. There are a few double forms of the Bunch-flowered Daffodil, and in China the double and single forms grow together of the "Good



Narcissus, Peter Barr.

This is without doubt the finest white trumpet Daffodil yet raised. It is of distinct form, having a beautiful pure white shouldered perianth and a large handsome elegant trumpet almost pure white. The flower is large and bold, of beautiful symmetry and fine substance. It is a strong grower and free bloomer, with handsome deep bluish-green foliage. F.C.C. from the Royal Horticultural Society in 1902. We are indebted to Messrs. Barr and Sons (who own the stock) for the use of the illustration.

* Read at the meeting of the Sea Point Horticultural Society (Cape Colony), September, 1901, by Mr. Peter Barr, V.M.H.

Luck Lily" or "Joss Flower," which is a variety of the Bunch-flowered Daffodil section.

We have no record what prices were paid in Parkinson's day for Daffodils, but they could not be cheap, seeing that Frenchmen made a business trip annually to sell Daffodils in London, and some of these were collected on the Hautes Pyrenees. The beautiful small white trumpet Daffodil, *Moschatus*, grows on the spurs of Mount Perdu, a place difficult of access. On one of my Daffodil hunts I went to the place with six Spaniards and a Pyrenean guide, sleeping under the rocks at night and travelling and collecting by day, till our commissariat ran short, and we had to make a precipitate retreat. On our return journey we broke into a small cheese factory in the Val Derrass, and helped ourselves to the whey, leaving money to cover our consumption. On our outward journey we had helped ourselves to the whey, and the owner knew we must return in the same direction, so locked up his place to keep us honest.

Daffodil Experts.

In the first quarter of last century there arose an active band of semi-botanical amateurs, some of whose names are worthy of remembrance. Salisbury, a clever botanist, had a fine assortment of Daffodils, which he grew at St. John's Wood, London. Sweet, who gave us a botanical dictionary and an illustrated work in seven volumes, now much sought after for libraries, viz., "Sweet's British Flower Garden." Ellecomb, a missionary in the neighbourhood of Leicester Square; Anderson, superintendent of the Physic Gardens, Chelsea, where a complete collection of Daffodils was grown, and thither the experts met over their favourite flowers.

We can readily imagine the many discussions on the different species, and the best modes of culture. These meetings may be accepted as the first of the modern conferences on Daffodils, and I can imagine that many a spear was broken between Salisbury and Haworth, two tough antagonists. Haworth at the time was preparing a monograph of the family, and, like Parkinson, putting the nomenclature of the Daffodil in order. The monograph is quite a little pamphlet, showing that the herbariums of Europe had been ransacked and every illustrated book consulted. The work is now rare, but if "Sweet's British Flower Garden" is in your public library you will find the monograph bound up with one of the volumes. I possess the last revision made the year preceding Haworth's death. I should mention Haworth was a prolific writer on many natural history subjects, and I think he gave a monograph of the *Mesembryanthemums* of Cape Colony.

Dean Herbert, of Manchester, about this time was working on his *Amaryllideae*, and when dealing with the Daffodil family and analysing what were supposed by all his predecessors to be species, felt sure some of them were hybrids. To satisfy himself on this point, he crossed the trumpet with poeticus Daffodil, and the seedling was truly intermediate. The problem solved, he had his flowers painted, and the water-coloured painting is bound up with Herbert's monograph of the *Crocuses*. Visitors to London will be shown this on calling at the Lindley Library at the offices of the Royal Horticultural Society, Victoria Street, Westminster, or at Barr and Sons' warehouse, King Street, Covent Garden, these being the only two copies I know of.

Dean Herbert made his discovery known early in the forties, and I have no doubt it created great interest, and that many took up the study, but only two men carried their work to the goal, viz., Mr. William Backhouse, banker, Darlington, and Mr. Edward Leeds, stockbroker, Manchester. To these two seedling collections the world is indebted for the pleasure in spring of cultivating a family of the most charming flowers, and enjoying them in their drawing rooms, since 1884.

The work of these two men commenced in the forties and ended in the sixties, representing some twenty-five years' enjoyment unshared by the outside world. At that time the Daffodil was despised, and few people would tolerate it in their garden. I took up the study of the Daffodil early in the sixties, working on the older forms known to Parkinson. In the seventies I became the possessor of Leeds' seedlings, and then Backhouse's seedlings, and during the following ten years I found my hands each spring very full, and my leisure time fully occupied in cleaning, classifying, and naming the Daffodils raised by the men named, both of whom had joined the majority long before the public realised how much beauty there was in the flowers of their handiwork, and how exceedingly valuable these flowers were in filling up a gap in our floral display outdoors and indoors.

While the Daffodil is the hardiest of spring flowers, it also lends itself to culture under glass or in a sitting room window. I do not suppose that Oscar Wilde knew anything about Daffodils, but there is no doubt in my mind that the great public are much indebted to him for the revolution in taste caused by his lectures on æsthetic colours. He broke down the prejudice to yellow, the artists followed him, and the public followed the artists. About this time I had finished my work, and the collection represented about 500 distinct sorts, ancient and modern.

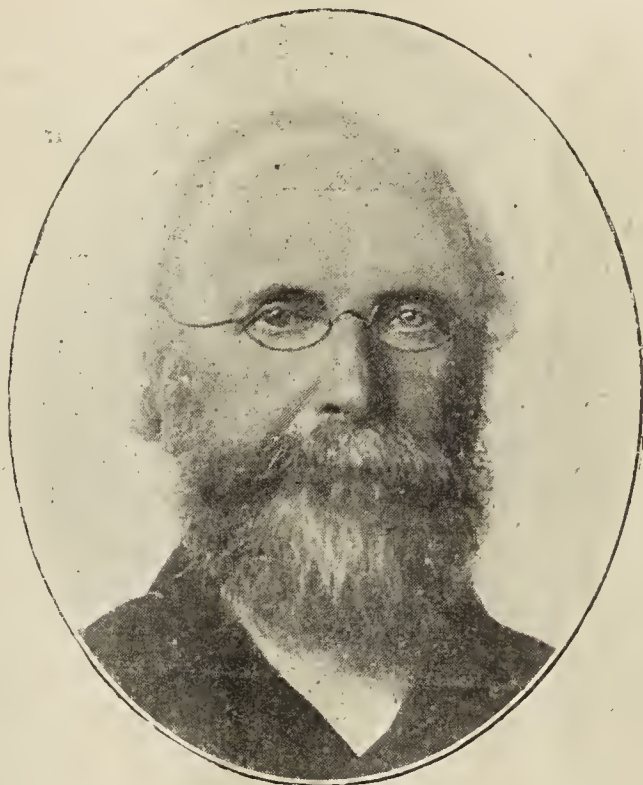
The Royal Horticultural Society held a great Daffodil Cen-

ference in the spring of 1884. From that day the fame of the Daffodil was secured, and like magic spread over the British Isles, extending to all Britain's colonies.

Having set the machinery, so to speak, agoing, I claim a right to be proud of the result of my twenty years' labour; during this period it was all outgoing and no incoming. The amateur is only one element, however; I created a new industry. The street flower girls and hawkers of London do a profitable trade selling Daffodils for at least three months in the spring. The Scilly Islands yearly send hundreds of tons of Daffodil flowers.

Mr. Peter Barr, V.M.H.

Peter Barr was born at Govan, Scotland—then a prosperous weaving village on the Clyde—in April, 1826, but more to his taste than looms or their products were the Tulip beds in his father's garden, and it was their beauty decided his fate. At an early age he was employed in the seed shop of Mr. Jas. Thyne, of Glasgow, eventually taking full charge of the seed department. His next appointment was with Messrs. Daly, Drysdale, and Co.,



Mr. Peter Barr.

seed merchants, of Newry, County Down, Ireland, when but twenty years of age, where he went through the terrible famine years of 1846-1847, caused by the general failure of the Potato crop. From Newry he went to Mr. Richard Smith's nursery at Worcester, then only sixteen acres in extent, and a year or two afterwards he was appointed manager to Messrs. Butler and McCulloch, of Covent Garden. After some years of experience in the London seed trade, Mr. Barr started as a seedsman in the autumn of 1861 under the style and title of Barr and Sugden. Two years later he commenced his labours on bulbs.

He has devoted much attention to hardy garden plants as well as seeds, beginning with the Daffodils and *Liliums*, and studying also other genera, such as the *Scillas*, *Hellebores*, *Funkias*, while more recently he has paid much attention to the beautiful genus *Pæonia* in all forms and variations, having travelled a good deal in Spain to collect the European species, some of which were known in herbariums, but unknown in cultivation. Mr. Barr has donated a collection of these European species to the Botanical Gardens of New York, Harvard, University of Pennsylvania, Schenley Park, Pittsburg, and other American institutions.

Mr. Barr's last work was on the old florist Tulips of historical fame. He got together the older collections of the Scotch, London, and Dutch to compare with the more modern of the midland counties and Lancashire, with the result that the modern men carried the day in form, chasteness of marking, and clearness of bottom.

A few years ago Mr. Barr resigned his business to his three sons and went on a tour abroad. At his home-coming a representative of this paper had a lengthy interview with the respected veteran florist, and the notes taken on that occasion are appearing in these pages, under the title "The Daffodil King on Tour," so that the main lines of his past six years are before our readers. Mr. Barr is hale and hearty, and may long be spared to study the various interests in his mind. He is at present in Scotland. The portrait of him was taken in 1896, when in Norway.



Anomatheca cruenta.

This pretty little Irid is a native of the Cape of Good Hope, whence it was introduced long ago; but up to the present time we were not aware that it had any claims to be considered a hardy plant. Captain Rogers tells us the plant has come up regularly for the last three years in his stable-yard, near the root of a Plum tree, and in a situation where it gets no benefit from the morning sun, and indeed only a scanty supply of sunlight for the rest of the day.

The Best Thirteen Violas.

I am often asked (writes Mr. Wm. Sydenham, of Tamworth) which are the best twelve or thirteen for bedding or exhibition. For bedding I have no hesitation in recommending the following thirteen. They were at the top of the Viola favourites during this season, 1903:—Councillor Waters, Accushla or Hector Macdonald, Molly Pope or Kitty Hay, Rolph, Skipjack, Duncan, Seagull or Swan, Blanche, John Quarton, Favourite, Golden Queen, White Beauty, and J. B. Riding.

Catalpa bignonioides.

Amongst many fine trees growing at Thornhill Park, Bitterne, near Southampton, there is one of the finest, if not the finest, specimen of the above-named species to be seen in this country. The stem at the base is 10ft in circumference. The tree, which is about 60ft in height, is now (August 20) well covered from the ground to the top with very large spikes of bloom, each individual Achimene-like flower measuring from 1½ in to 2 in across. Thornhill Park is not what is called a show place, but there is much there to interest the horticulturist, especially the grand collection of coniferous trees growing in the pleasure grounds, and anyone fond of woodland scenery, extensive views, and, just now, some splendid patches of heath quite dazzling to look at, could do much worse than pay a visit to the genial head gardener, Mr. George Busby.—C. S. F.

Species of Clematis.

The collection of species of Clematis at Kew is at present in good condition for studying. The lanuginosa varieties are in a bed by themselves, and include the favourite and best sorts. Each in a round bed by itself, and at suitable distances apart on the open green sward are the species, numbering about a score, some of which are not seen out of botanical gardens, even though they are beautifully decorative.

Thus there is the yellow flowered *C. orientalis tanguitica* (drooping like a *Fritillaria*); the dull, the metallic brown *C. fusca*; the charming crimson-flowered *C. coccinea*; the primrose bell-like *æthusifolia latisepta*, which bears hundreds of its drooping little blossoms from slender, twining branchlets. With these there are *C. campanulæflora*, with lovely white and mauve tinted flowers, quite like those of a small Campanula; also *C. viticella* in varieties white, violet, or purple, and furnishing one of the finest types of plants it is possible to find for covering pillars and pergolas with at this season. These are all of a climbing character.

Amongst others to be noticed are *C. orientalis* (type) with its light glaucous foliage and very slender, "sprayey" growth. *C. connata* is desirable for its foliage alone, which is a lively green, the leaves being imparipinnate, having five leaflets. The leafstems are opposite, clasping the stems.

The intermedia varieties may be compared to the better known *C. viticella*'s. They are profuse bloomers and effective en masse. *C. coccinea* from Texas, makes a better show against a sheltering wall, in a sunny border, than on a wooden support in the open. *C. vernalis*, which flowers early in the year, like *C. montana*, has foliage not unlike that of *Spiræa japonica*, though not serrated. It is a good climber. *C. montana*, by the way, and also the *C. vitalba* or Traveller's Joy, are splendid plants for forming bowers of. *C. flammula*, *integrifolia*, and *heracleifolia* are each interesting, the latter two being dwarf. *C. integrifolia* may frequently be found in herbaceous borders; while the *Heracleum*-leaved Clematis is a good "wild garden" plant.

Violas as Rock Plants.

When once tried as rock plants Violas will be much appreciated. They do well, produce an abundance of bloom, and generally thrive better than in any other part of the garden. Miniatures are particularly at home when grown in this position. Pigmy, Robin, Minnie Warren, Commodore Nutt, White Dot, Quail are a very interesting set.

Winter Aconites.

The Winter Aconite, or *Eranthis hyemalis*, is an excellent subject to carpet any wild border or shrubbery with yellow flowers, which appear in January. The tubers may be planted in autumn, from October onwards, placing them 2 in apart and 2 in deep in any ordinary soil. When planted they will come up annually, remaining a permanent feature, and flowering freely before the Snowdrop. The tubers are cheap, the best being obtainable at 2s. 6d. per 100. Tubers may also be planted in large pans for windows, verandahs, cool house, or sheltered positions.—S.

Bulbous Plants in Greenhouses.

It is a strange fact that large numbers of practical gardeners can cultivate plants to perfection, yet they have as much knowledge of, and taste for staging the same, as a dock labourer might be expected to have. It is a serious and great failing, but, unfortunately, columns of printed matter cannot supply a faculty that is wanting, the lines can only suggest what might be done. But where the power of imitation is good, an illustration like the one given (p. 243) can be of service. Grouplets and masses of one sort of plant are generally more beautiful, and more pleasing to the mind, than a studied mixture of subjects of all forms and hues. A house such as Mr. Chamberlain has at Highbury, which is span-roofed, with a door only at one end, is, when filled with sloping banks of all the various spring-flowering bulbous genera, arranged in bold harmonised masses, a sight of great resplendency and grandeur. We commend a display of this nature, as we also commend the arrangement of such a collection as the illustration shows.

Dog's-tooth Violets.

Erythronium Dens-canis, the Dog's-tooth Violet, is a hardy bulbous perennial, remarkable for having leaves beautifully marked with white and bronze. The flowers are of mixed colours. Dog's-tooth Violets are better adapted for outdoor treatment than indoor, and are admirable for growing on a rockery or a front position in an herbaceous border, as well as for edging beds filled with spring flowers. The compost best suiting them is sandy loam and leaf soil, intermixed with peat. The bulbs should be planted at once, 4 in deep and 2 in apart, in bold groups for rockeries and borders, and in lines for edging beds. They will also thrive under the shade of trees, hence their value for the wild garden, where they can remain as a permanent feature. Their value as pot plants is not very great, though they will succeed in a cold house. Pot the bulbs now an inch apart in 5 in pots, and place at once in cold frame, where they may remain until advanced in growth and showing flowers, which will be in February or March.—D.

Lilium Harrisi.

The Bermuda or Easter Lily, *Lilium Harrisi*, is largely used for forcing. Good, firm, healthy bulbs should be procured and potted now, so that they may have a long season of steady growth under cool conditions rather than attempting to force them along in heat after late potting. One bulb is sufficient for a 5 in or 6 in pot. The compost most suitable is simply three parts of good, fibrous loam, and one of leaf soil, with sand added. Drain the pots efficiently, and half fill with compost, on which place the bulb, covering with half an inch of soil. This will be ample until growth commences. The best place for the pots at first is a cold frame or cool house, and so long as the soil remains moist, no water will be required, but afford it as necessary after growth begins. On the shoot attaining 3 in in length, top-dress with a mixture of loam, leaf soil, and manure in equal parts, leaving room below the rim of the pot to supply water. Keep the plants near the light in order that the growth does not become drawn. Do not force them until necessary, then commencing gradually at 50deg, but not exceeding 65deg. The watering must not be neglected. The plants when in full growth will appreciate a little weak stimulant. When in bloom give cool treatment.—E. D. S.



Général Jacqueminot Variety.

At the recent Abbey Park Flower Show, Leicester, the age of Général Jacqueminot Rose was discussed. It was sent out in 1853, and at the present time, a half century later, it is still a very fine exhibition Rose, as well as being much grown for cutting and market purposes. In a review of the "Roses of 1854," which appears in the October number of the "Florist" for that year, the late Mr. Thomas Rivers remarked, in reference to this Rose: "Général Jacqueminot is one of our new Roses and most striking from the size of its flowers, which are of a rich shaded crimson. It has, however, two faults: its flowers are not sufficiently double, and its habit of growth is slender and delicate." And Mr. Rivers went on to deliver himself of a truism, that "We now require Roses perfect at all points; larger and

True Perfumery Rose.

When Mr. Fred M. Reed was travelling in Europe two or three years ago, he visited Grasse in the south of France, the centre of the manufacture of perfumes and essences from Rose and Orange blossoms. He was especially interested in the true perfumery plant growing in the adjacent country, but was not allowed to take either cuttings or roots, as that variety of plant as well as the secrets of manufacture, is guarded with jealous care. He secured some blossoms which he preserved.

After returning he made inquiry of botanists as to the French perfumery Rose in this country, but could learn of no plants. He then wrote to the botanical department at Washington. Mr. Galloway, then chief of the bureau of plant industry, replied that there was no sample of that variety in their collection, and as far as he knew, it had never been introduced into this country, as it was very hard to secure, but said he would make an effort to get a sample for him. Some weeks ago Mr. Reed received a letter—announcing that he had secured and was forwarding to Mr. Reed some of the perfumery Roses—from Mr. Peters, who has in charge the matter of introducing new plants into this country for the Agricultural Department.

The plants were received in good condition from their long journey. Mr. Reed gave samples to Prof. Zumbro and E. L.



Bulbous Plants in the Greenhouse (See page 242.)

double flowers, opening freely; fine, healthy foliage, and a vigorous, hardy habit."

Probably in such standard varieties as Alfred Colomb, Beauty of Waltham, Charles Lefebvre, Duke of Edinburgh, Dupuy Jamain, Marie Baumann, Mrs. J. Laing, Pride of Waltham, and Ulrich Brunner (not to mention some of the new Irish Roses), the ideal Rose of Mr. Rivers is nearly produced. But our ideal assumes proportions as we get near to it, and it is always possible to picture an ideal flower in advance of our choicest possessions.

How nearly has Général Jacqueminot approached Mr. Rivers' ideal? I turn to the description given of it in Messrs. Frank Cant and Co.'s Rose Catalogue, and I read of the dear old Général that it is "bright-scarlet crimson, globular, with pointed centre, perfect shape, a fine, free flowering Rose, still one of the best, and especially for forcing; vigorous habit." The Général improved on acquaintance, and largely remedied the two faults found with it by the veteran Rivers.

The moral to be drawn is that with the Roses, as with some other flowers, the experience of two or three years at least is necessary to form an authoritative opinion upon the positive merits of any particular plant or novelty. I think it is likely "General Jack" will yet be grown for some years to come.—R.D.

Koethen, and planted fifteen plants himself, all of which are growing nicely. But the variety has but one brief season of blooming—in May—so the interesting part will have to be waited for.

The foliage is a dull pale green. Mr. Reed says the blossom is quite like that of the old-fashioned Cabbage Rose. Mr. Peters, now in California on business for his department, called on Mr. Reed on Saturday, and was pleased to find the Rose plants he had secured all living and in vigorous condition. He said they had made much better progress than those planted in the department garden at Washington.

Mr. Peters is a very pleasant gentleman, enthusiastic in his special work, and doubtless is accomplishing what may prove of far-reaching benefit to California as well as to other parts of the country in introducing new varieties of plants. From here he goes to Imperial to study the conditions with reference to introducing the Date Palm for commercial purposes.

However successful these first perfumery Rose plants may prove, for various reasons it will probably be many years before the Rose perfumery industry will become commercially valuable in this country, but when it does some day, Riverside will have the satisfaction of having introduced the first plants.—(Riverside Press.)

NOTES

NOTICES

New Varieties of Potatoes; Their Prices.

Another new Potato of Mr. Findlay's, which has not yet been placed on the market, has recently been sold at 28s. per lb, Mr. George Massey, of Spalding, paying £20 for a stone of them. The variety (Eldorado) is a main crop, with good disease-resisting qualities, and those sold at this price (over £3,000 per ton) are part of a crop now growing in the North of Ireland.

A Fence on Wheels.

In large public gardens, the invention which the directorate of the Royal Gardens at Kew have adopted in order to preserve portions of the lawns and edgings from being trampled on and spoilt, should be of great service. This is simply a stout wire fencing, 2½ ft high, fixed by means of bottom supports, to run on wheels. Each length of fencing may be 8 ft. Thus arranged, the fence can be wheeled to wherever wanted.

Fruit and Vegetable Show at Chiswick—Alteration in Schedule.

The prizes offered in class 52 for Apple "Charles Ross" will be open to nurserymen and market growers, as well as to gardeners and amateurs (see Division V., page 24). Intending exhibitors at this show can obtain a copy of the schedule with the official entry form, on application to the Secretary, R.H.S., 117, Victoria Street, S.W. Entries for this show close on Tuesday, September 22. At a general meeting of the Royal Horticultural Society, held on Tuesday, September 1, twenty-two new Fellows were elected, making a total of 1,117 elected since the beginning of the present year.

Royal Gardeners' Orphan Fund.

Writing from a garden near Bath, a correspondent says:—"May I trouble you to forward the enclosed P.O., value 3s. 6d, to the Secretary of the Royal Gardeners' Orphan Fund, as I do not know his address? The gardens were open to the public on two Sundays, and it occurred to me that by placing a box on one of the gates, with a note stating the object for which money was solicited, I might get something to send for the benefit of the little ones left to the mercy of the charitable by past brethren of craft. My effort resulted in almost a total failure; but I hope to do better another time." [We have received the secretary's receipt for the 3s. 6d.—Ed.]

Exhibition of Edible Fungi.

On Tuesday, September 15, the Royal Horticultural Society will hold an Educational Exhibition of Edible Fungi in the Drill Hall, Buckingham Gate, Westminster, 1.5 p.m., and an illustrated lecture upon them will be given by Dr. M. C. Cooke, M.A., V.M.H., at three o'clock. All interested in extending or acquiring the knowledge of the edible species are invited to send collections. Collections should, if sent, be delivered at the Drill Hall on Monday afternoon, September 14; or, if brought, should arrive at, or before, 9 a.m. on the Tuesday, so that they may be properly grouped and arranged by the fungus specialists. Intimation of an intention to exhibit should, if possible, be sent a few days before to the Secretary, R.H.S. Office, 117, Victoria Street, Westminster, S.W.

Croydon Gardeners' Outing.

The fourth annual outing of the Croydon and District Horticultural Mutual Improvement Society took place on August 26, about thirty members availing themselves of the day's pleasure. Starting from the Sunflower Temperance Hotel, a most enjoyable drive in a char-a-banc took the party to Burford Lodge, where, through the kindness of Sir Trevor Lawrence, Bart., the party were shown round the gardens by Mr. Baines, the able head gardener. The visit proved full of interest and enjoyment. Afterwards the drive was continued to Dorking. In the afternoon, Albury Park, the residence of his Grace the Duke of Northumberland, was the rendezvous, and the spacious gardens and pleasure grounds here were inspected. Croydon was reached in good time at evening, each participant expressing his full appreciation of the trip, and congratulating his companions on the extremely fine weather experienced throughout the day.

Warley Cottage Garden Show.

The fifth exhibition of garden produce under the ægis of the Great and Little Warley Cottage Garden Show, was successfully held on September 3. Miss Wilmott, V.M.H., is president, and gave the prizes.

Mr. Robert Sydenham.

This gentleman has safely arrived at the Cape of Good Hope, and hopes to visit the principal towns in that part of Africa. He will be present at the National Chrysanthemum Society's Show at the Crystal Palace in November.

Albanian Onions.

The harvesting of the Onions will now begin in a week or two. If it is not too wet weather during the harvesting the Onions will be better in quality and more durable than last year. The size will again be generally large, and the quantity of the crop will be smaller than last year. This is not only because part of the fields were lost shortly after sowing, but also because a smaller quantity has been cultivated, owing to the low prices of last year.

The Jam Season.

As it is impossible to get fruit for jam-making this year, might I suggest to people who grow Vegetable Marrows the advisability of letting some ripen and selling them for jam-making? Such jam is very wholesome and good. I made some last year, one Marrow yielding 14½ lb after being prepared for jam. I hope to make twice as much this year. As they are still growing strong it is not too late to save them, but they must be quite ripe before cutting, and then be laid by for a month after that.—J. C.

Tigridias.

Tigridias, or Ferrarias, are very brilliant while they last in flower, but unfortunately the blooms only last one day in perfection. The bulbs should be planted on a dry, sunny border, preferably where the display can be seen from the windows, as the different coloured blooms, each thickly covered with spots, are exceedingly attractive while they last. The best time to plant the bulbs is April, 3 in deep and 5 in apart, placing a little sand around and under each bulb. Mulch and water freely in dry weather.—K.

Naturalised Daffodils.

The idea of planting large masses of Narcissi, Squills, Crocuses, Fritillaries, and Tulips in grass lands is comparatively new, but is annually spreading fast and becoming more and more developed. Here, as in other phases of gardening, mistakes can be made. It is not an uncommon sight to see a newly planted sheet of grass, with some hundreds of flowers, each standing far apart from its neighbour, and seeming none too comfortable. Thin planting is permissible, and even best, where the grass is rough and long, and the Daffodils are well set off; but where the ground is inclined to be bare here and there, or has a scanty herbage, the effect produced is far better, if close-set grouplets are made of the bulbs. And the varieties are also best when left unmixed. What a shame, for instance, to plant Ard Righ's amongst Horsefield's, or poeticus with Barri conspicuus or Frank Miles. Keep them by themselves. Messrs. Veitch, of Chelsea, have kindly placed the illustration on the opposing page, at our use, and it shows a good example of correct planting.

Local Rating Appeal.

Messrs. Walter T. Ware, Limited, florists, of Englishcombe, were assessed to the poor rate on an assumed annual value of £370 9s. Notice of appeal to the County Quarter Sessions was given. Before the hearing came on it was arranged that the matter should be referred to a jury, which, however, could not agree, but appointed Mr. John Alderson Foote, K.C., as umpire. Mr. Foote held several sittings and visited the property, and his award has just been published. Mr. Foote fixes by his award the rateable value of the property at £258 19s. per annum. He also awards that his fee of £94 14s., and also the costs of the reference be paid by the Union Assessment Committee. The case is of considerable importance to nurserymen and owners of horticultural buildings, because the umpire decided that the cost, or assumed cost of the buildings, could not be taken into consideration for rating purposes, but that the only question was what rent such buildings would fetch. Mr. Isaac Williams was the solicitor for the Union Assessment Committee, and Messrs. Stone, King, Stone and Thomas, represented Walter T. Ware, Limited.

Bulbs and Their Culture.

At this season of the year the thoughts of all who are interested in gardening naturally turn to the consideration of bulb orders and bulb culture generally. The numerous species and varieties now play so important a part in adding brightness and beauty to our homes and gardens that it is really painful to imagine how dreary they would be without them.

Too long we have depended upon the Continent for our supply, with the result that huge sums of money have annually been drawn from this country to enrich the dwellers in other lands; because, forsooth, it was generally supposed that good bulbs could not be propagated and grown in our sea-girt home. A change for the better in this respect has, however, been gradually taking place during the last ten years, and now the finest samples of Daffodils, Tulips, and Hyacinths, grown in Britain, are equal in point of merit to those obtainable from any other source.

Lincolnshire and Ireland must each claim a large share of credit for this improved state of affairs, and it is to be hoped that bulb culture will still extend until Britain supplies the greater portion of her own requirements. In order to encourage the home trade, purchasers should remember the above facts, and endeavour to obtain the products of their own land.

It is always a wise plan to order early, as the best samples are disposed of first, and those who rely upon being able to pick up cheap lots at sales often find them to be dear; on account of their unsatisfactory results.

For early forcing the following can be strongly recommended: White Roman Hyacinth, Double Flesh-coloured Italian, Paper White Narcissus (*grandiflora*), and the Double Roman. Tulips: Duc Van Thol (scarlet), La Reine, Pottebakker (white, yellow, and scarlet), Rose Gris de Lin (rose and white), and Proserpine (salmon). Daffodils: Princeps and Van Sion. These should be grown in quantity where there is a great demand for cut flowers, and the Roman Hyacinths, early Narcissus, and Tulips may be had in flower from the beginning of November onwards, and the Daffodils at Christmas, to be followed by the choicer varieties with large trumpets. Where the above have not been already obtained they should be ordered at once, and potted or planted in boxes as soon as received.

In selecting bulbs one should never be led away by mere size, as the best samples are heavy in proportion to their size, and have a smooth clear skin instead of being rough and scaly on the outside (see illustration on page 257). The bulb contains the plant and flower in the embryo; and although it is not possible to add a single additional belt to a Hyacinth spike by subsequent treatment, yet good culture will do much towards securing the fullest possible development to the baby plant within the bulb; and, on the other hand, unsuitable treatment will prevent full development, and in some cases prevent flowering altogether, even when the finest samples of bulbs have been obtained. It is, there-

fore, a matter of the greatest importance that the soil used for potting, and the subsequent treatment, are both suitable. Some writers aver that it matters but little what soil is used for potting; but let me urge cultivators not to accept this theory as being generally correct, as I have seen far too many failures through following such advice. The great desideratum is not so much to use a rich soil as to get a rooting medium comparatively free from insects and fungoid spores. Soil which has been used for growing early crops of Tomatoes often answers well with the addition of a little leaf soil and sharp sand; but in some cases such a soil is so full of eelworms as to entirely prevent satisfactory root action.

Good garden soil which has been dried, turned a few times, and enriched with leaf soil and wood ashes, will often answer as well as anything. A friable turfy loam which has

become mellow with age also answers splendidly with the addition of leaf soil and sand; but freshly cut turfy soil is not suitable, as roots do not work freely in it until the fibre has considerably decayed. When there is a doubt about the suitability of any soil, the safest course is to burn it, and it will then always be found satisfactory. When natural manures are added they should always be thoroughly dried and passed through a fine sieve; but I prefer steamed bonemeal at the rate of a 6in potful to a bushel of compost.

All pots should, of course, be well but not excessively drained, and when showy potfuls for decorative purposes are required, the bulbs may be arranged as closely as possible. When, however, extra fine individual flowers are required, a little more space must be allowed. In the case of Tulips and Roman Hyacinths six to a 6in pot answer well.

When very early forcing is carried out, it is not easy to get all the flowers in a pot to open simultaneously. The general practice, therefore, is to force in boxes and transfer to pots—or to other receptacles used for decorative purposes—when the flowers are almost fully developed.

In the case of bulbs grown for supplying cut flowers throughout the winter and early spring, boxes should be used in preference to pots on account of economy, the result being quite as good as under any other system. The

bulbs should be arranged in the boxes so as to touch each other, the crown of each being just visible upon the surface soil. A light sprinkling of sand on the top will allow the plunging material to come away easily when the pots or boxes are removed.

The great demand for cocoa-nut fibre has sent the price up so high during recent years that very few can afford to use it largely for plunging purposes, for which it is so splendidly adapted. A substitute is found in the shape of fine shavings and sawdust from hard woods, and now often used; and then we have that useful material coal ashes. This forms capital plunging material provided it has been exposed to the weather for some weeks, or, better still, months, to allow the deleterious properties to escape.

An excellent plan is to save such materials throughout the summer, and then pass them through a half-inch sieve before using for plunging purposes. Surround the pots or



Naturalised Daffodils.

J. V. & Sons.

boxes containing bulbs with any of the above materials, finishing off with a 2in or 3in thickness on the top. Never remove the bulbs from their plunging material for the purpose of forcing them until at least an inch of growth has been made. —ONWARD.

Quid pro Quo.

(Concluded from page 210.)

Hours and holidays, to save space, may run tandem with hours as the leader. Here the whole gardening staff, being directly affected, is included. To head gardeners personally the matter is less pertinent, they as a rule being first in the garden and last out of it. With the usual 6 a.m. to 6 p.m. arrangement, and meal times, according to local custom, there is probably but little to cavil at. The long days of summer, too, being counteracted by the short days of winter, with bad weather relaxing the tension of labour, are factors we must include in an honest calculation. The main object in approaching this phase of the question is a plea for the early "knock off" on Saturday.

In this masters would confer a boon on their men and under judicious management certainly lose nothing. If the garden worker is worthy of his hire, then, surely, he is worthy of this little encouragement, and in those parts of England where men with the cares of a family upon them, and often those without, may be seen cultivating their cottage gardens till noon on Sunday, the Saturday afternoon would, presumably, be devoted to it.

It is, however, less a question of how they would spend it than of obtaining it, and when that happens all right-minded men, old or young, in the bothy or out of it, would undoubtedly appreciate the boon to the extent of its giving an additional zest for their employer's work and interests. But few with a knowledge of all sorts and conditions of gardeners will hesitate in placing them on a par with factory operators or trade-workers, with whom the Saturday afternoon off has long since been a recognised institution.

The whole gardening Press advocates it, much has been said and is being said in its favour, but much, practically all, remains to be done. The wheeler in our tandem team is, perforce, the Bank holidays, and what has been said for the leader applies to it, beyond adding that when all the world and his wife are keeping lawful holiday, the gardener being left to toil and moil the common round, the daily task, invidious comparisons are drawn, and the inconsistency is glaringly apparent.

Perhaps the Act of Parliament which created Bank holidays might have gone farther, and insisted upon their observance. Perhaps not. However that may be, it is but poor encouragement to the loyal, honest, hard-working gardener of any degree to be ignored as one of a class unworthy of this privilege, and, apparently, speaks but little for the esteem or appreciation in which he is held by his master.

Think you that my lord, the Earl of — (I hope the time will come when his honoured name may be published), who but rarely sees one in particular of his country estates, is worse served, or is one iota out of pocket when, some two years since, on one of his rare visits to it, the order was spontaneously given that *all* his employés should have the Bank holidays? Ah, no! Like master, like man. It is such masters who create the best of feeling, obtain the best of service, and transform men from spiritless drudges into cheerful, active servants, for "no profit is where is no pleasure ta'en."

Ere prescribing a salve for the sore, no inference need be drawn that any disparagement of masters is implied, for none is intended. No two classes of men live in better or more intimate relationship than masters and their gardeners, possibly not any as good. The dilatoriness of progress in the betterment of gardeners must be attributed to old customs inherent and peculiar to gardening alone, old customs which appear to die harder here than elsewhere; the factors of supply and demand, in the excess of the former over the latter, which would be an inferior obstacle if a less elastic subject permitted a more rigorous selection of the fittest, and a want of cohesion in the gardening fraternity. There are, certainly, other weak links in the chain, but the above are the weakest, and upon viewing the matter analytically it is less a matter for surprise than it is one for

regret that the status of gardeners moves so slowly in the hurrying stream of life.

In adverting to the fact that some of the noblest, worthiest, and most philanthropic, and, it may be added, the most practical patrons of the art of gardening, have shown their sympathy towards its exponents in all ways alluded to here, and in other ways, for instance, in their generous support of the Gardeners' Royal Benevolent Institution, paves the way to promulgate the idea which has prompted this paper.

In a United Kingdom Gardeners' Association, which is not a very formidable name after all—in a great combine which shall bring all gardeners worthy of the name within its folds, we have—What? is asked. Is it labour against capital? Is it class against class? Men against masters? No! The Fates forbid. No such bogey need frighten the most timorous brother of the craft. We—the weak—shall take the masters—the strong—along with us, and, as players in this very serious game of life—a gardener's life—hold them as trump cards, even the King himself. In the treatment of his gardeners the King is a model master, and with his beloved Consort, the Queen of all hearts in these Islands (another trump card), a tower of strength from whose summit a kindly light may illumine the shady places of gardening England. With a strong executive, composed of those honoured masters who, in the treatment of their men, have "lured to brighter worlds and led the way," and with the most illustrious leaders in the gardening world, a foundation could, surely, be laid for a practical working scheme strong in its simplicity, with power to permeate the United Kingdom and leaven the lot.

The bulk of British gardeners can, of course, do little more than give their moral support to it, the little more being, possibly, a tax on their slender pockets to the tune of an annual shilling to cover working expenses and give them a claim to membership. It may reasonably be supposed that masters who have already recognised their gardeners with an adequate *quid pro quo*, in its comprehensive sense, are sufficiently interested and sympathetically disposed to lend their names and possibly assist an object with which they are in accord, and from which their more fortunately placed gardeners could not only scarcely hold aloof, but give it their warm and active support. Then, surely, it is not supposing too much in saying there should be but little difficulty in drawing out working plans on a scale sufficiently large to cover all the ground we have gone over.

The question of ways and means can, perforce, be but roughly outlined here and do little more than invite discussion on the subject to the end of future elaboration; not too far in the future, it is hoped. With a central executive and branches throughout the kingdom, publishing, possibly, a monthly journal, posting leaflets, or other literature embracing a mass of facts, evidence and examples, and setting forth the chief fact that this conjoint betterment of the gardener, in the way of wages, lodgings, hours and holidays, does not indirectly affect the master's pockets, things should go ahead.

In a general organization only can vigorous advancement be expected, and the onus attached to individual effort, or the danger of any man being told he is free to leave what he does not like, reduced to a minimum. One cannot but think that masters, whose attention is diplomatically directed to what is being done for the betterment of gardeners, by illustrations of model gardeners' cottages and bothies; by notices of places where better wages, less hours and more holidays rule; by pertinent articles from men and their masters, too, who have had experience of this government of their gardens—one cannot but think that the effects would be wide and far-reaching and worthy of the great cause all have equally at heart.

Is it not time that a move should be made in the matter? And is it not possible to move so vigorously, yet so tactfully, that even the most conservative masters shall say: "Your gentleness shall move our force more than your force shall move our gentleness."—QUIZ:

The Horticultural Journal.

Registered with a capital of £3,500, in £1 shares, to acquire and carry on the business of printers and publishers of the "Horticultural Journal," general printers, &c., carried on at Spa Mill, Padiham, as Cooper and Co., and to adopt an agreement with C. M. Cooper, J. Simpson, and W. Baldwin.—("British and Colonial Printer.")

Societies.

Royal Horticultural, September 1st.

The following Chinese species of *Vitis*, each an ornamental climber, were staged by James Veitch and Sons, Ltd., Chelsea:—

V. armata.—This is as vigorous in growth as *V. Coignetiae*, and has broadly ovate entire leaves, the petioles and main stems being abundantly studded with nearly erect spines. A handsome and showy species. Award of Merit.

V. megaphylla.—This is a species with much compounded leaves, reminding one more of a *Koelreuteria* than of a *Vine*. The green leaf with reddish petiole measures about 16in long. From Central China. Award of Merit.

V. Thomsoni.—A remarkable and attractive species. The leaves are five-lobed, of a reddish shade on the upper surface, and a distinct violet-purple on the reverse side. They are supported on short stalks about 5in long. By means of tendrils the stems and branches readily obtain support. From every point of view this is a valuable climber. First-class Certificate.

V. flexuosa Wilsoni.—A slender-growing variety with ovate, acuminate leaves 2½in to 3in across. Award of Merit.

V. sinensis.—This *Vine* has the peculiarity of producing simple cordate leaves and three or five parted leaves on the same plant. Thus it will be seen to be a variable species, yet not the less beautiful on this account. It is tall and vigorous, abundantly furnished with foliage. Award of Merit.

R.H.S. Scientific Committee, September 1st.

Present: Dr. Cooke, V.M.H. (in the chair); and seven members.

Hippeastrum species.—Col. Tillotson sent flowers of a plant sent from South America. The petals were of a pale clear green, passing into primrose, the stamens and pistils bright pink, and protruding far beyond the petals, which were almost closed at the apex of the flower. Though not very attractive in colour, it was thought it might be useful to breed from, on account of the great substance of the petals.

Raspberry, Wineberry, Blackberry Hybrids.—Mr. H. Peerman sent specimens of the foliage (the fruits had fallen off, and could not be identified) of three hybrids, Blackberry x Raspberry, Raspberry x Wineberry, Wineberry x Raspberry. They were considered most interesting, and he was requested to send again next year, each in a separate box, with both fruit and foliage.

Bud Formation.—Mr. J. Robson sent "a section from a young Sycamore exhibiting the extraordinary facility with which this tree develops wood buds from the alburnum." The tree had been budded on the bare space between two leaves, and the bud had failed, but from the base of the incision the stock had sent out a growth "where no eye previously existed. I have twenty-five or more examples of the same thing in Sycamores, but though I have budded many subjects I have never noticed the same thing in any other genus."

Hippeastrum Blistered.—Dr. Bonavia sent some leaves of *Hippeastrum* "covered with something that looks like scale, but which adheres so closely to the epidermis that it is difficult to remove." The scale-like blotches, on examination, proved to be not of insect formation at all, but blisters due probably to defective root-action, itself due to a check of some sort, such as cold or too much wet.

Cryptococcus on Weymouth Pine.—Mr. R. Knight-Bruce sent a specimen of bark literally swarming with the white woolly or waxy *Cryptococcus* which attacks Pines, and which, he says, is rapidly spreading, and killing plantations of the Weymouth Pine. The Committee considers the case almost hopeless, but suggested spraying the trees with a paraffin emulsion. Mr. Wilks said he had but little hope in spraying *Cryptococcus*, as, unless the sprayer was peculiarly strong and powerful, the fluid would not penetrate the downy wax with which the insect covers itself over. He had known a case of a Beech tree being saved by hand scrubbing with a brush, using softsoap and paraffin emulsion; but he had never known spraying to be successful.

Discoloured Vine Leaves.—These were received from Mr. Neild, of Holmes Chapel. Dr. Cooke reports:—"Vine leaves with broad irregular patches of bright coloration have been known and observed for the past half century. Sometimes the colour is yellow, or becoming brown, and sometimes reddish, or claret colour. In America it is known as the California Vine disease (see U.S.A. 'Reports of the Department of Agriculture,' xx., 1892). This, or a similar disease, is known in Sicily as 'Folletage,' and in Italy as 'Mal Nero.' No satisfactory reason has yet been assigned for this affection, as no trace of fungi has been found, and there is no cause to suspect that fungi of any kind have anything to do with the discoloration. Leaves are constantly being submitted to the Scientific Committee for report as to the cause or remedy, but none can be given."

Floriferous Sweet Pea.—Mr. Hunt sent a flower-stalk of Sweet Pea having seven fine blossoms.

Proliferous Helenium.—The Rev. C. Wolley-Dod, V.M.H., sent flower heads of this, remarking that one particular plant in his garden always produces them; and that, as a rule, small secondary flowers grow out of the disc.

Campanula lactiflora, linear-leafed.—The Rev. Wolley-Dod sent a curious "abnormal" form of *C. lactiflora*, which comes in



Spray of *Ixia*. (See page 248.)

S. & S.

small percentage from the seed of the typical form, perhaps one in 200. The linear leaves can be recognised early in the seedling stage, and I never saw intermediate forms. Analogous forms with stellate flowers are not uncommon in *Campanula rotundifolia*, and De Candolle in his "Monograph of *Campanula*" figures

and describes one on *Campanula medium*, which he considered unique in the genus.

Silver-leaf disease in Apples and Plums.—Mr. Gaut brought specimens from an orchard of seven acres in Yorkshire. The soil is warp-land, varying in depth from 1ft to 3ft within short distances, and overlying clay. The drainage is good, with drain-pipes. Shelter is afforded by the fruit trees in the orchard. The altitude is nearly sea-level. The general culture has been to give a good dressing of farmyard manure every four years and lime every few years. The trees had been planted ten years,



Scilla campanulata rosea.

J. H. & S.

and silver-leaf appeared three years ago and gets worse every year, and the trees affected in summer die the following year. The varieties affected are Victoria Plums, of which there are about 500 trees; and Lord Grosvenor Apple grafted on Keswick Codlin stock.

Mr. Gaut remarked that the matter was creating considerable interest in Yorkshire, and the soil had been analysed with the following result:—

THE AIR-DRIED SOIL CONTAINS IN 100 PARTS:—

Water	3.10 per cent.
Loss on ignition (organic matter, combined water, &c.)	5.09 "
Mineral matter	91.81 "
	100.00

Containing nitrogen	0.151 per cent.
Equal to ammonia	0.183 "

The soil was free from root-fibres, or any visible organic material.

It had been said by some experts that silver-leaf was due to a lack of nitrogen in the soil, but the analysis seemed to show this could hardly be the case. Dr. Cooke said that the disease was so mysterious because he could find no spores or mycelium of fungus and no bacteria. He knew of no remedy, but advised cutting out the parts affected the moment the disease was seen and burning them. See also "Royal Horticultural Society's Journal," vol. xxvii., pages 713, cxliii., and cxlix.

Rose leaves diseased.—Mr. J. W. Scott sent three bundles of Rose leaves diseased. "No. 1. The plants are in good health, and at present there is but very little of the disease on them. No. 2 is taken from small pot stuff spring grafted, and seems to develop those spots when grown in a high moist temperature. No. 3 appears to be like the last attacking plants that are in a soft growth, and we have it in several houses, in some cases stripping every leaf off the stem, but on taking the lights or glass off, the plants recover to a great extent."

Dr. Cooke pronounced the disease in each case to be *Actinonema rosæ*, called by growers the Black Mildew. It is a fungus disease very common all over Europe, and though it may be checked by Bordeaux mixture, no actual remedy is known. It was considered to be greatly stimulated and encouraged by

growing the plants too closely together without sufficient air and light, or in too humid an atmosphere. It is advised to dry the plants off and let all the leaves fall (which should be collected and burnt), and then induce them to make altogether fresh growth.

Scottish Horticultural.

The September meeting was held in Dowell's Rooms, George Street, Edinburgh, on Tuesday, the 8th inst. There was a very large attendance of members, many from the country, the meeting being held on the eve of the Edinburgh Autumn Exhibition. There were a large number of new members elected and proposed. The paper of the evening was "The Cultivation of Vegetables," by Mr. Gibson, Danesfield, Great Marlow. Mr. Gibson's great fame as a grower and exhibitor of vegetables rendered his paper more than usually interesting, and the audience were certainly not disappointed.

Starting with very pointed instructions as to the general culture and the preparation of the soil, Mr. Gibson proceeded to give details as to his method of cultivating the leading sorts, both for culinary use and for exhibition, treating very shortly on the growing of Potatoes, Onions, Celery, Peas, Cauliflower, Beet, Carrots, Parsnips, Sprouts, Tomatoes, Leeks, and one or two other minor kinds. After the paper was read a number of limelight illustrations were given of some of the choicest varieties usually exhibited by Mr. Gibson, and of a number of collections which Mr. Gibson has recently exhibited with success. An interesting discussion took place on the paper, amongst the speakers being Mr. A. Mackenzie, Mr. Grieve, Mr. Sutton, of Reading, &c. A very warm vote of thanks was accorded to Mr. Gibson.

There were a large number of most attractive exhibits, which evoked great interest from those present. Messrs. Methven and Sons had a beautiful collection of early flowering Chrysanthemums, prominent being Golden Gem, Market White, Horace Martin, Mytchett White, &c. A cultural certificate was awarded. Mr. John Downie exhibited handsome seedling Carnations. Messrs. Todd and Co., Shandwick Place, had very beautiful vases of handsome new varieties of Montbretias, fine Comet Asters, grown where sown in the open air; Lady Fitzwygram Chrysanthemum, with long stems. A cultural certificate was awarded.

Mr. Todd also exhibited a handsome specimen of Carrie early yellow Chrysanthemum, raised by Messrs. Wells. A first class certificate was awarded. Mr. Smale, Blackford House, exhibited a nice lot of Streptocarpus, which were much admired. A number of handsome new varieties of Lobelia cardinalis were sent by Mr. McHattie from the public gardens; also a gigantic Hydrangea, nearly 5ft high, with a single stem and a head of bloom 5ft in circumference. A cultural certificate was awarded. Mr. Johnstone, Hay Lodge, showed a vase of handsome Fuchsias. Messrs. Methven and Sons were awarded a certificate of merit for their improved strain of Large York Cabbage, of which very handsome specimens were shown. A hearty vote of thanks was awarded to the exhibitors. A vote of thanks to Mr. McHattie, president, brought the meeting to a close.

SCILLA CAMPANULATA ROSEA.—The wild English Bluebell (*Scilla nutans*) is one of the loveliest flowers of spring, and one we would sacrifice a great deal for, rather than lose. Acres and acres, through shady copses and woods, are seen in May and June, and its albino variety is a much-prized gem in gardens of every sort. Nor are the varieties of *S. campanulata* (or *S. hispanica* of the botanists) less appreciated. We are able to figure the handsome *S. campanulata rosea*, and there are also white and blue varieties of this easily grown bulb. Edging lines to shrubbery borders or to formal paths in rustic flower gardens, are suitable places for these Scillas, and the blues and whites, or pink and whites, go well together.

IXIA AND SPARAXIS.—We do not know of any very successful culture of these graceful and showy flowers as open-air subjects. Like the Freesia they are somewhat too tender to be satisfactory even in the warmest of our English gardens. True it is that a great many people grow them out of doors in sunny borders, especially when the soil is of a sandy nature, but they lack a bottom effect—they have no setting, no foil, and that is fatal. Ixias, however, well deserve good pot culture, and they refresh the conservatory wherever they are. Their culture is simple, though care is required at the start. They can be potted shortly. Messrs. Sutton's illustration shows a strong spray of Ixias. Sparaxis are very closely allied, and demand the same culture. Possibly their colours follow the richer tones more than do the Ixias. Messrs. Webb's block on page 249 depicts a showy potful of the bulbs in flower. For vases and glasses these flowers are almost indispensable. *Ixia viridiflora* has been suggested as a suitable floral emblem for the new Transvaal colony.

National Rose.

DATE OF THE METROPOLITAN EXHIBITION.

To the Honorary Secretary of the National Rose Society,—When, at the annual general meeting of the National Rose Society, held last December, it was decided by a majority of one to hold the Metropolitan Exhibition in the gardens of the Inner Temple on July 1st in preference to July 8th, some of us doubted the wisdom of the decision. A leading evening paper, in its report of the show, dated July 1st, states, "The National Rose Show this year is an exhibition representative only of the southern counties. The midland and northern counties will not be able to show for a fortnight or so. That the Southerner has had it all his own way will be seen by the record of the trophies and principal prizes." We may add to this, that in no instance was the Southerner at his best. But even if he was, the compulsory absence of the Northern and Midland growers, not only in this, but in several years past, seriously challenges our Society to the name of National.

At the Metropolitan Exhibition is held the friendly contest for the championship of the year. This gives it an importance not possessed by any other Rose show. When this is held Roses should be at their best. Can it be maintained that Roses are at their best between July 1st and 4th? Yet it is on these dates that the Metropolitan Show has been held six times during the last seven years. We are, therefore, of opinion that the Metropolitan Exhibition is held on too early a date.

If it be pleaded that this exhibition should be held alternately, early and late, we would reply that the latest date on which this show has hitherto been held is not late, but barely midseason. And, mindful as we are of the large number of exhibitors residing south of London, we nevertheless think that the interests of individual exhibitors should be subservient to the interests of the N.R.S. as a whole; we desire that the public may see the Roses at their best, and that the Metropolitan Show may be recognized as the best Rose show of the year. Distance from London militates against a representative gathering of rosarians at the annual general meeting. We therefore deprecate that the fixing of the date of this important exhibition should be left altogether to a chance majority of those attending and voting, and we ask that to "Regulations to Exhibitors," should be added these words, "The Metropolitan Show shall not be held earlier in the year than July 6th."

S. Reynolds Hole, President, The Deanery, Rochester; F. R. Burnside, Vice-President, Great Stambury Rectory, Roehford, Essex; George Gordon, Vice-President, Kew; E. B. Lindsell, Vice-President, Bearton, Hitchin; Henry V. Maehin, Vice-President, Gateford Hill, Worksop; Joseph H. Pemberton, Vice-President, The Round House, Havering-atte Bower; Alfred Tate, Downside, Leatherhead; W. Wilks, Vice-President, Shirley Vicarage, Croydon; R. N. G. Baker, Vice-President, Heavitree, Exeter; H. H. D'Ombrian, Vice-President, Westwell Vicarage, Ashford, Kent; J. Ramsay (Capt.), Vice-President, Yvery House, Fareham; A. Foster-Melliar, Vice-President, Sproughton Rectory, Ipswich.

[Extracts from the annual reports of the National Rose Society for the past seven years then follow, showing that only in two years out of seven was the Metropolitan Exhibition a good one.—Ed.]

A few copies of the above memorial have been circulated for signature. There has already been a ready response. May I ask those members of the N.R.S. who have not received the circular, and who, approving of the memorial, desire that their names should be added, kindly to communicate with me?—JOSEPH H. PEMBERTON, Havering, Essex.

Cardiff Gardeners'.

Through the kind invitation of Mr. John Basham, Fair Oak Nurseries, Bassaleg, thirty of the members drove to Bassaleg and were entertained by Mr. and Mrs. Basham to tea a day or two ago. Afterwards the party were conducted through the fruit gardens, where a fine, healthy, and large stock of Apple and Pear trees are carrying very heavy crops. Particularly so are the following varieties, viz.: Allington Pippin (remarkably fine), Bismarek (grand), Col. Vaughan, Ecklinville Seedling (an enormous crop), Lady Sudeley, Lane's Prince Albert (very heavy cropper and an abundant supply), The Queen (spoken of as a shy bearer, carrying enormous crops), Schoolmaster (good), as also were Stirling Castle and Warner's King, and very fine fruits of Peasgood's Nonesuch.

Young Pear trees on walls were carrying good crops. Plum trees were remarkably good. A cleaner and healthier lot of fruit trees it would be impossible to find, and though Mr. Basham suffered failure last year, he is amply rewarded this season, for tons of Apples are near maturity for storing. Light refreshments were served in the gardens. After thanking Mr. and Mrs. Basham for their kindly hospitality, the brakes conveyed the party back to headquarters, after spending a most enjoyable outing.—JOHN JULIAN.

Ipswich Mutual Improvement.

A well attended meeting of the above society was held on the 3rd inst., Mr. J. Morgan occupying the chair. A paper on "Decorative Plants" was read by Mr. H. J. Southgate, St. Helen's Nurseries, Ipswich. The particular phase of the subject which the essayist treated was that of plants adapted for the decoration of the mansion. For this purpose it was necessary that the plants selected should be of such a nature as to stand exposure to such adverse conditions as insufficient light, cold draught, effects of gas, &c., or, on the other hand, should be of such quick growth and so readily propagated that fresh stock could be easily worked up to replace those destroyed. Amongst suitable plants for the purpose Palms occupied the foremost position, Ferns, Crotons, Dracænas, Aspidistras, Grevilleas were of great value, while among flowering plants Richardias, Poinsettias, Heaths, Bouvardias, Primulas, and many other kinds might be pressed into service. Considerable discussion arose out of many interesting cultural details given by Mr. Southgate in the course of his paper, at the close of which he was accorded a hearty vote of thanks on the proposition of Mr. E. Creek, seconded by Mr. Whittell.—E. C.

Eaglesfield, Dumfriesshire.

One of the most successful and extensive Scottish flower shows is that held at Eaglesfield, Dumfriesshire. It is conducted on the same lines as many other country shows, having classes for many non-horticultural subjects, but the horticultural classes are not only numerous, but draw exhibitors from a wide area. As usual, this year's show, held on September 5, was exceedingly successful, though as is usual everywhere this season, fruit was exceedingly short, and not up to its usual quality here.

Pot plants and vegetables were very fine, and cut flowers were good, though the heavy rains and windstorms had left their traces upon many blooms. In the open classes the most successful with pot plants were Mr. Wm. Webster, Springhill Gardens, and Mr. W. Anderson, Mossknowe Gardens. In cut flowers Mr. E. Cameron, Eriestane, Moffat, led in Roses, Antirrhinums, "Geraniums," buttonholes, and herbaceous plants; Mr. W.



Sparaxis.

Webb & Sons.

Veitch, Carlisle, in Stocks, Dahlias (all but single, where Mr. J. Burton, Penrith, was first), Gladioli and quilled Asters; Mr. D. Whitelaw, Lochbarbriggs, was first in Marigolds; Mr. A. Ruthven, Eaglesfield, in Phloxes; Mr. J. Johnstone, Lockerbie, in Pentstemons. Mr. E. Cameron was first for Currants, Peaches, and Grapes; Mr. T. Burton for dessert Apples; Mr. W. Orr for cooking Apples; Mr. W. Webster for Plums and Melons. J. and R. Currie were first and second for a collection of vegetables,

and other winners of first prizes in this section were W. Anderson, J. Currie, D. Brown, T. Downie, J. Wright, J. Burton, J. Friendship, J. Blake, Jas. Harkness, W. Veitch, J. Thomson, T. Henderson, E. Cameron, T. Taylor, A. Carlyle, J. Irving, and B. Bell.—S.

Croydon Improvement.

A new departure in the programme of the Croydon and District Horticultural Mutual Improvement Society was successfully carried out at their rooms, Sunflower Temperance Hotel, on Tuesday evening, when "Discussions on Floral Decorations with Demonstrations" created a very enjoyable two hours' entertainment. The principal interest was centred on three dinner tables, which had been tastefully and artistically decorated by Messrs. M. E. Mills, A. Maslen, and P. F. Bunyard respectively, and the decorative excellence in the floral art displayed by these gentlemen called forth a very meritorious word of praise from all present.

Edinburgh Autumn Show.

The great annual autumn exhibition of the Caledonian Horticultural Society was held on Wednesday and Thursday of this week, and was a great success. The entries all over were very large, though, owing to the poor season some sorts of fruit were not so numerous as usual, and the total entries were thus slightly fewer than those of last year. Grapes were a very fine show, both in quantity and quality, while plants and cut flowers were up to former years.

The exhibits by nurserymen were very numerous and highly attractive. Year by year an increasing number of the trade are anxious to exhibit their specialities in the capital of Scotland, till it is with the greatest difficulty that all the exhibits can be accommodated even in the capacious Waverley Market. At the time of our going to press it is impossible to give a detailed report of this fine exhibition, and this must stand over till next week. Just as we go to press our reporter wires the decisions of some of the leading classes, as follows:—

In the fruit classes, Mr. J. H. Goodacre, of Elvaston Castle, Derby, who was invincible at Shrewsbury, here in the further North was first for the fruit on the decorated dessert table, though only third for the decorations. Mr. D. Kidd, of Carberry Towers, Musselburgh, was second for fruit, and first for decoration; while Mr. W. Smith, from Oxenford, was third for fruit and second for decorations.

For the ten dishes of fruit Mr. Goodacre again was foremost; Mr. Mackinley, of Amptill, Beds, coming second. Messrs. D. and W. Buchanan, of Kippen Vineyard, Stirling, were the champions for six bunches of Grapes; and second Mr. Beisant, of Castle Huntly. For the four bunches Mr. Goodacre was leader, and Messrs. Buchanan second, the struggle being as tight as at Shrewsbury.

For the brace of Muscats, Mr. Hughes, of Kingsmeadows, beat Mr. Goodacre. The latter won for the two bunches of Hamburgs. The Dunn Memorial Medal and first prize for a collection of Scotch-grown Apples fell to Mr. R. Sinclair, of Congleton, East Lothian. The leading prize for a collection of vegetables was ably won by Mr. Gibson, of Danesfield, Great Marlow (whose essay we note in the report of the meeting of the sister horticultural society of Edinburgh, i.e., the Scottish Horticultural Association). Mr. Harper, of Tulliebelton, was second.

Mr. Geo. Wood, of Oswald House, Edinburgh, was first for a group of plants set up for effect. In the nurserymen's classes, Messrs. Cocker and Son, from far Aberdeen, led the way for a collection of hardy border flowers; and they added firsts in the classes for thirty-six, eighteen, and twelve Roses respectively, Messrs. D. and W. Croll, of Dundee, coming second in these latter classes, and Mr. Hugh Dickson, of Belfast, third. For the dozen vases of Roses Mr. Ferguson, of Dunfermline, was first, Messrs. Cocker second, and D. and W. Croll third. It was a fine show, and drew a large number of visitors.

Amongst trade exhibits which were being arranged when our reporter wrote were Messrs. R. B. Laird and Sons, a very large group of Palms, Lilioms, and Azalea mollis; Mr. John Downie, Messrs. Dickson and Co., Messrs. Thos. Methven and Sons, Messrs. Storr and Storr, Dundee; Messrs. Dobbie and Co., Rothesay; Messrs. Grieve and Sons, Redbraes; Mr. A. F. Dutton, Bexley Heath; Mr. Jannock, Dereham; Mr. Forbes, Hawick. Messrs. Todd and Co., florists, show a very beautiful table of bouquets and designs, all most tastefully executed in Roses.

Trade Catalogues Received.

Bulbs.

Bakers', 67, Lichfield Street, Wolverhampton.

R. Veitch and Sons, 54, High Street, Exeter.

Vilmorin-Andrieux and Co., 4, Quai de la Megisserie, Paris.—Also Strawberries.

Wm. Watson and Son, Clontarf Nurseries, Dublin.—Carnations.

Weather Notes.

Temple House Gardens, Great Marlow, Bucks.

The register of rainfall here for August, 1903, was 4.00in, and for August, 1902, 3.65in. The maximum temperature for August month, 1903, was 76deg on August 8, and the minimum 40deg on the 21st. The maximum for August, 1902, was 78deg on the 29th, and the minimum 44deg on the 10th of the month. In August, 1903, there was hail and thunder on the 10th, a gale on the 15th, thunder on the 17th, heavy thunder and rain on the 24th. On the latter date 0.94in was registered between 9 a.m. and 4 p.m.—GEORGE GROVES.

Sussex Weather.

The total rainfall at Abbots Leigh, Haywards Heath, for the past month was 4.05in, being 1.64in above the average. The heaviest fall was 0.93in, on the 14th. Rain fell on fifteen days. For the fourth time since 1880 we have had an August rainfall of over 4in, viz., 1881, 4.63in; 1893, 5.83in; and 1902, 4.18in. The maximum temperature was 73deg, on the 13th; the minimum 40deg, on the 23rd; mean maxima, 68.28deg; mean minima, 50.20deg; mean temperature, 59.24deg, which is 0.74deg below the normal. This has been a wet, sunless, stormy month, and a very bad one for both gardeners and farmers. The land has been so continuously saturated that it has been impossible to get Potatoes out of the ground, and now there are about two-thirds of them diseased and completely useless. Late Peas do not fill out, and except we get brighter weather will be a failure. The harvest, which is generally finished by now, is still mostly in the fields, and is much damaged by wind and rain.—R. I.

Notes from Hamilton, N.B.

The weather is an ever prominent topic of discourse here. The whole of August was very wet, varied with a few storms of high winds, which, of course, did much harm in gardens and fields. The whole year has been inauspicious, but many had hopes that August would turn in to compensate, in a measure, for the past; but despite the German prediction that the month of August would be on the whole a good one, it was, in fact, among the worst. And now September is with us, and those of us in whose breast hope springs eternal, looked forward to this month for better luck, but have, as yet, been unrequited, for every day since the month began has been wet.

Strange to say, wasps have been a veritable plague among indoor fruits. I do not remember of seeing so many for years, and never under similar conditions. Probably this is due to the dearth of outside fruit. District flower shows have suffered from the backwardness of the season.—D. C.

Trade Notes.

Clibrans' New Grounds.

In their new Carnation and Pansy list, just published, Messrs. Wm. Clibran and Son have the following notice:—"All our glass houses, offices, packing department, &c., are now removed from Oldfield to a new site at Bank Hall Lane, Hale, 15 minutes' walk from Hale Station."

Thos. S. Ware, Ltd.

Messrs. Ware, in sending their bulb catalogue, point out that they have opened a London shop and depôt at 25, York Road, Waterloo Station approach.

NARCISSUS TAZETTA.—That variety of the Polyanthus Narcissus which we grow here in England (often in fancy bowls simply filled with pebbles and water) as the Sacred, or Good Luck Lily of China and Japan, owing to the facilities offered by the trade for securing good bulbs cheaply, has long been one of the leading favourites amongst the kinds that are early forced. The flowers are deliciously scented, and not too powerful, while the white perianths and yellow cups, in clusters, are charmingly sweet. Each bulb produces several flower spikes. Large numbers of amateurs who have but little greenhouse or plant-frame accommodation, can grow this Chinese Sacred Lily. And it is most interesting to watch the growths as they quickly grow—quick, that is to say, as far as plants are compared. It will make twenty inches in forty days. In basins or bowls, the bulbs can be grown in dwelling-houses, placing the plants near the window by day, but away from it (or from draughts and chills) during the night. Our illustration is from Sutton and Sons.

Neglected Lines in Hardy Bulbs.

That fickle mistress—fashion—at whose slightest nod so many are ready to pay obeisance, exerts an enormous influence upon gardening as well as in other things. Styles of gardening come and go; plants come into popularity and then pass into obscurity. Opinions differ as to whether this is a benefit or no, but it must be admitted that fashion has done much to stimulate the improvement of a flower, and has led to vast additions to its beauties. Even the movements of fashion when carried to excess have brought in their train benefits which have been handed down to distant generations. One need only cite a familiar example in the craze for Tulips which raged in the time of the tulipomania of past days, which, with all its extravagance and folly, led to an advance in and the improvement of this fine flower. On the other hand, these changes of fashion have had an evil influence as well. Plants of equal beauty to those which have become fashionable have been thrust into the cold shades of neglect, some to become lost to cultivation, but still more to linger almost unseen in out-of-the-way places or in botanic gardens, visited only by a few of the great populace of our country. Then some plants as susceptible of improvement as the flowers which become the favourites of fashion have remained as they came from Nature's laboratory, beautiful enough, but not perfected by the skilful culture and work of the florist. What has been done with the Hyacinth, the Tulip, the Iris, the Crocus, or the Gladiolus by means of the hybridisation of a few species, might have been performed and may still be done with many other lovely bulbous flowers which await a like share of attention. The results yet to be achieved may absolutely revolutionise our gardens.

Apart, however, from these phases of the subject, a still simpler one calls for notice. This is the manner in which the average gardener—amateur and professional—fails to utilise many of the bulbous, cormous, or tuberous plants ready for him, and contents himself with working upon the old and stereotyped lines. Let us look at a few of the plants which occur to one in thinking over the subject, and a rapid alphabetical survey brings us almost at once to a genus of flowers, many almost worthless for the garden, but many again of great beauty. This is the genus *Allium*, comprising a number of summer-flowering bulbs which are not well enough known either for planting in grass or, the choicer members alone, in the border or rockery. How many know the pure white, drooping flowers of *Allium triquetrum*, or the pretty blooms, equally white, but closer heads, of *A. sub-villosum*, not to take account of the many others never seen except in the garden of the enthusiast. Then one might think that the *Anemones* would be sufficiently appreciated, but, while this is true of such flowers as *A. coronaria* and *A. hortensis* and their varieties, there are thousands of gardens where the lovely early *A. blanda*, flowering often in the south with the dawn of the year, or even the cheap *A. apennina*, as hardy as our common Wood Anemone, is quite unknown. Then how many know even the yellow *A. ranunculoides*, with its sulphur-coloured variety, *pallida*? Not one in a thousand, I venture to affirm.

Then we have another class of bulbous or cormous flowers in the *Antholyzas*, almost of barbaric beauty in their colouring, and among the best of our autumn bulbs. Such fine species as *A. paniculata* is of great value, with its handsome leaves and fine scarlet and yellow flowers. Were it taken in hand and an effort made to hybridise it with some of the *Montbretias* or

other allied plants we might have results which would amount almost to a revolution among our hardy bulbous flowers.

Much has been done of late by various firms of note, to popularise the *Brodiaëas* and *Bloomerias*, but the heaven has not yet permeated the world of gardens as a whole. Such summer-flowering bulbs are of inestimable value, and the time ought to come when they will be largely used either in beds alone or in groups. How far some of these are suited to planting in grass is not properly known, but could we succeed with a mass of *Brodiaea ixioides* or others of the genus growing in the grass we should obtain a new feature altogether in our gardens. Or this and others might be carpeted with some surface rooting annuals, through which the flowers would spring, and which would compensate for the leaves of the bulbs, which pass away ere the flowering is over. Then the lovely *Calochorti*, though they require some care in the open, should be far more widely grown.

Bulbocodiums and *Colchicums* afford much room for greater regard, the former mainly for spring and the latter for autumn. The old purple-coloured *Bulbocodium vernum* makes a fine show in early spring before the *Crocus*, while the best of the *Colchicums* are far superior to the old *C. autumnale*. Such species as *C. speciosum* or *C. Bornmuelleri* may well be called the Tulips of the autumn, and ought to be more largely grown. Then the double Meadow Saffrons are such free-flowering and lasting things that their neglect is almost inexplicable. The *Crocus* and *Montbretias* cannot be said to be "neglected lines," but many of the *Crocuses* would come correctly under the category. Who that has seen thousands of the autumn-flowering *C. speciosus*, of *C. zonatus*, of *C. iridiflorus*, or of the beautiful *C. Imperati* of the earliest days of the year, and will not include many of the *Crocus* species among the "neglected lines"? Steady work on these and other *Crocuses* would yield a wondrous result, greater it may be than that which has followed from the cultivation of the favourite Dutch *Crocuses*.

Among the smaller bulbous or tuberous plants comparatively neglected are the *Erythroniums*, or Dogs'-tooth Violets, in their numerous species, the hardy spring and autumn *Cyclamens*, and even the old and cheap *Eranthis hyemalis*, the Winter Aconite. I know many, many gardens where this so-called "common" plant is absolutely unknown, while its congener, *E. cilicicus*, has only found its way into a mere handful of gardens where hardy flowers are especial favourites.

Fritillarias, except, perhaps, the noble *F. imperialis*, appeal mainly to the esoteric few, but some on whom the mantle of old James Justice may have fallen might with gain to gardening operate among the numerous species, and give us a new race of these chequered and curiously interesting flowers. In themselves, even as they are, the species repay the little care the majority of them require at our hands.

One may pass over the *Galanthus* or Snowdrop with the remark that the last word has not been spoken in the way of improvement here. Then the *Galtonia* is not neglected by some, but many more might use with great benefit the noble *G. candicans* for their autumn gardens. Viewing the glorious spikes of the *Gladioli* of the present time, we dare hardly include it among the "neglected" bulbs, but one may point out that there are many charming species among the plants of the genus, and that the good old border flower, *G. communis*, and the cheap *G. segetum*, are unworthy of neglect in themselves, and afford a profitable field of work for those who seek to raise a new and hardier race. One may also mention as worth some notice now the new *Dracocephalus* hybrids, or *G. princeps*, as flowers



Polyanthus Narcissus, Her Majesty.

to be procured by those who wish to cultivate little known. Among the closely related Scillas, Chionodoxas, and Puschkinias, we have some neglected plants of worth. *Scilla sibirica* is too widely grown to the exclusion, or almost so, of *S. bifolia*, a varied plant with pretty flowers and procurable in blue, white, flesh colour, and, more rarely, in pink; while there are various oddments, such as the true *S. amoena*, well worth considering. Then the dainty little *Hyacinthus azureus*, with its Muscari-like flowers very early in the year, is a lovely little thing. So is *N. amethystinus*, a gem of a later season. As for the dainty Puschkinias, or the tiny *Chionodoxa nana*, the Musk or the tasselled Hyacinths; how few there be that grow them.

Among the bulbous Irises there are many neglected plants. Because the Spanish and English Irises are cheap and beautiful there is no reason why we should not enjoy the pretty *I. sindjarensis*, the love'y little *I. Rosenbachiana*, the exquisite *I. reticulata* and its varieties, and the considerable number of others to be found in the catalogues of the bulb dealers. Then how small a number of gardeners know the little crimson *Lapeyrousia*, or *Anomatheca cruenta*, which is hardy in warm soils, and which looks so delightful in the shade. *Leucojums* are not absolutely neglected bulbs, but many more should cultivate the neatest of all, *L. autumnale*, which flowers from July onward with exquisite little white blooms. With these one may speak of the *Romuleas*, pretty summer-flowering Crocus-like bulbs, which want a warm place and a sunny situation. A word, too, must be said for the Lilies, hardly ever seen in gardens. Why need we devote ourselves almost entirely to *L. auratum*, *L. candidum*, *L. longiflorum*, *L. croceum*, *L. tigrinum*, and such—fine though they are—and neglect *L. Szovitzianum*, *L. pardalinum*, *L. Humboldti*, *L. Martagon dalmaticum*, and the many other choice *Liliums* at our command?

It seems an absurdity to speak of the *Narcissi* as among the neglected lines, but it must not be forgotten that there are many interesting and beautiful things among them which are seldom seen. If we look through Messrs. Barr and Sons' catalogue there will be found such gems as *N. cyclamineus*, *N. gracilis*, *N. Macleai*, *N. juncifolius*, *N. triandrus pulchellus*, and others which would delight those who could find for them a fitting place.

To conclude, one can merely glance at some of the *Ornithogalums*, such as *O. pilosum*; the *Oxalises*, such as *Bowieana*, or *euneaphylla*; the *Sternbergias*, not easy to flower everywhere, it may be, but worth many a trial before confessing one's self beaten; the charming *Zephyranthes candida*, and a few others of the genus, and to finish with, the many Tulip species, with endless variety of colour, shape, and size. All these show us that there are many neglected lines even among introduced hardy bulbs. Were a demand for these to arise it would lead to their being cheapened and brought in quantities within the reach of the masses.—S. ARNOTT.

Irish Gardeners' Association and Benevolent Society, Dublin.

The following address was received by H.M. the King at Dublin Castle on July 22, 1903, from the Irish Gardeners' Association:

To His Majesty Edward VII., King of Great Britain and Ireland, Emperor of India, &c. May it please your Majesty, we, on behalf of the Irish Gardeners' Association and Benevolent Society, beg to tender to Your Most Gracious Majesty, and to your illustrious Consort the Queen, our most loyal and hearty welcome on this your first visit to Ireland since your Majesty's accession to the Throne. Representing, as we do, a large body of your loyal subjects, who appreciate the great interest your Majesty takes in the welfare of those engaged in horticultural pursuits, and in honouring with your Royal patronage the Gardeners' Royal Benevolent Institution and the Gardeners' Royal Orphan Fund of England, whose objects are of a similar character to our own, we feel that the present is a fitting opportunity to express our sincere gratitude and profound respect on this occasion of your visit to Dublin, and we humbly hope and pray that it may be your Majesty's gracious pleasure at some future date to honour with your illustrious patronage the Irish Gardeners' Association and Benevolent Society.

THE RELATIVE VALUE OF LARGE V. SMALL BULBS.—The references and pictorial illustration furnished by Messrs. Sutton and Sons, of Reading, in their new bulb catalogue deserve the fullest publicity, for they are good. Their remarks are as follows, and their illustration we have used on the opposite page:—"We should like to remove one very common but erroneous impression. The value of a bulb is frequently estimated by its size, and this opinion especially prevails concerning Hyacinths. It is quite true that some varieties, when fully matured, are remarkably large. Others attain only a medium size, while certain Hyacinths are always below the average. There is also considerable diversity in the form and appearance. The essential point, however, is density. The accompanying illustration, reproduced from a photograph, shows at a glance that a large bulb may not contain the nucleus of so fine a spike as a much smaller bulb."

THE BEE-KEEPER.

Autumn Feeding and Preparation.

The essentials of safe wintering are numerical strength, plenty of good food, pure air, warmth, and dryness, but many bee-keepers in their preparations for winter fail to secure these requisites, and the inevitable trouble which they term bad luck comes. All colonies should be sufficiently strong to cover at least seven bars, and the majority of these bees must be young ones, these not having lost their vitality by labouring will be the ones to carry on the brood-raising, &c., at the most critical time in the following spring. The life of the worker bee is governed by the amount of work it is called upon to perform, and if queens cease laying too early in the autumn through lack of income the colony consequently goes into winter quarters with comparatively few young bees. The second essential is a sufficiency of wholesome sealed food in the proper position.

There is much doubt as to the exact quantity of food necessary to support a stock through the cold months, but if there are from 20lb to 25lb sealed by the middle of September it will be ample. Rather less water is necessary in making syrup for autumn feeding, five pints of water to 10lb of sugar being plenty. Syrup of this consistency will require very little evaporation.

The other essentials are warmth and dryness in the hive. Any leakages in the roof should be attended to, and quilts examined periodically throughout the winter, in order to ascertain if they are perfectly dry. Extra warmth is, of course, obtainable by dummies and quilting. Stocks which do not cover seven bars should be united, as if left to winter singly they will succumb through inability to maintain the requisite heat. Weak stocks are unable to evaporate the superfluous moisture from the syrup, and are consequently unable to seal it up, which renders them liable to dysentery. Every comb that the bees do not actually need should be removed.

During autumn feeding, all entrances should be narrowed to prevent robbing and loss of heat, the latter assists in the evaporation of moisture from the food. The object of slow feeding in the autumn is to artificially prolong the harvest at the cessation of which the queens discontinue breeding. This continued ovipositing is the greatest desideratum for wintering safely and coming out strong in the spring. The crowding of bees for winter is not always carried out as it should be. If contracting and feeding up is done early, i.e., the brood nest reduced to about seven bars of bees, they will have no alternative but to store the food in the upper portions of the combs and on both sides of the brood, and as the latter hatches the empty cells will supply the requisite clustering space, in the natural position.

Much of the success of wintering depends upon the location of stores, an abundance of which on the outside combs where the cluster cannot reach, will not compensate for a deficiency in the centre. If feeding in the autumn is allowed to drift until cold weather sets in the food will remain unsealed and liable to fermentation, and the bees will have no empty combs to cluster upon, which (even if a very powerful colony) places them at a great disadvantage in maintaining the required temperature throughout the winter.

American apiarists whose winters are much more severe than ours, recommend that the bees should be crowded into as small a space as they can be forced to occupy. The heat is thus prevented from escaping around the nest, and upward ventilation avoids any risk of moist vapours. It is well known that the strongest stocks consume less honey than the weaker ones during the winter months, and if economy is the object of the bee-keeper, the consumption may be minimised still further by uniting and contracting. It will be apparent that the temperature around a cluster of bees will be higher than in the remotest part of the hive, so that by contraction to a smaller space the insects are able to maintain a temperature of 65deg by consuming less honey.

This feeding causes a corresponding amount of activity which in the winter is injurious. Further, it is important to have young and vigorous queens for wintering, or else autumn stimulation to obtain young bees will be a dismal failure.

Before the middle of October stocks should be examined carefully, and all combs not covered should be removed, and where there is a deficiency of food it must be remedied by supplying bars sealed up. It is a bad practice to open hives in the spring, or to disturb them in any way during the months of quietude. If feeding has to be resorted to, wait until the bees are active some fine day when the temperature is between 50deg and 60deg, and then insert a bar of sealed stores, or, failing which, a cake of candy over the feed hole. At this period of the year candy must not have any substitute for pollen, such as peafLOUR mixed with it. Excrement is produced by pollen, not by honey and syrup, so that candy will be sufficient to sustain life until they can take flights frequently enough to prevent them discharging themselves on the combs and becoming generally dysenteric.—E. E., Sandbach.



Fruit Forcing.

VINES: MIDSEASON HOUSES.—When the Grapes have been cleared from the Vines, divest the shoots of their laterals down to the principal buds, which are to be retained for next year's fruiting, but be careful to avoid injuring the old leaves, for upon their preservation and health depends the maturation and plumping of the buds, also the storing of nutrition in the adjacent wood, as well as the ripening of the growths, which is essential to a good break and proper development of the bunches in their early stages next season. Allow a free circulation of air, and in the case of luxuriant or young Vines, or where there is the least doubt about the thorough maturity of the wood, maintain a gentle warmth in the hot-water pipes. After the removal of the laterals clear off the remains of the mulching or remove the loose surface soil, particularly near the collar of the Vines, picking the old soil from amongst the roots, and supply fresh lumpy loam in its place. Avoid burying the roots deeply; a couple of inches is quite deep enough. They will push adventitious roots into the new material, and these can be encouraged to any extent by timely dressings or surface mulchings when the Vines are in need of support another season. If a handful or two of approved fertiliser per square yard is applied, it will aid the Vines wonderfully in the early stages of growth another year. Inside borders will need watering, so as to keep the soil healthfully moist. In the case of borders that are only partially made, a breadth of about 2ft may be added to the front, choosing dry weather for the operation, and compressing the materials moderately. If inside afford a good watering; if outside it will not be necessary unless the compost is dry.

YOUNG VINES.—Afford every encouragement essential to the perfecting of their growths, keeping the foliage clean, removing all laterals, as growth produced after this time is of little value, and maintain a warm, well ventilated atmosphere, until the canes are thoroughly matured. Any supernumeraries intended to fruit next season should have the laterals cut away to the principal buds, leaving, however, an outlet for the sap by a few joints of the laterals beyond the length of cane to which they are to be shortened, and be careful not to injure the principal leaves. If the wood does not ripen kindly, it may be accelerated by keeping the house rather warm in the daytime, so as to get a temperature of 85deg to 90deg from sun heat, opening the ventilators at night. Afford sufficient water at the roots to prevent the foliage becoming limp.

LATE HAMBURGHES.—Houses of these and other tender-fleshed Grapes that were allowed to start naturally may need a little fire heat to colour and finish the fruit satisfactorily, as they will when it is hopeless to do anything more with the thick-skinned Grapes. They should have a temperature of 60deg to 65deg at night, and 70deg to 75deg in the daytime, with a circulation of air constantly, and free ventilation when favourable. Water the inside border if necessary, and when the Grapes are only partially advanced in colouring and ripening. Only restrict the laterals to prevent overcrowding, as a good spread of foliage over thin-skinned black Grapes is the best safeguard against the sun taking colour out of them when ripe. When the Grapes are thoroughly finished reduce the temperature, maintaining it at about 50deg by artificial means by day and 5deg less at night, with a little air constantly.



Large v. Small Bulbs. (See opposite page.)

LATE THICK-SKINNED GRAPES.—These are less affected by atmospheric moisture than thin-skinned, Mrs. Pince shrivelling in a house where there is sufficient moisture to cause Muscat of Alexandria to rot. They are also liable to give evidence of finish that will not bear close examination; therefore make sure that the berries are well finished right up to the shank before ceasing the needful aid from fire heat. In a confined atmosphere Gros Colman sometimes splits at the nose of the berries when ripening; also Gros Guillaume in less degree. Alicante and Lady Downe's finish better and in less time than any other late thick-skinned varieties; then the latter should be given more time, also the white varieties, Trebbiano and Syrian, and after they are apparently finished a temperature of about 55deg should be assured, with a rise of 5deg to 10deg by day and a circulation of air until the foliage is giving indications of falling, when a temperature of 50deg is sufficient. The inside border should be watered in the early part of a fine day and air be freely admitted, for it is not so much the moisture as the confinement that causes the berries to spot and crack. Outside borders will be quite damp enough from the recent rains. In case of very heavy rains it is advisable to cover outside borders with spare lights to throw off the wet, especially when the soil is liable to hold water, a sodden condition of the border inducing sourness and consequent shanking in the Grapes.

LATE MUSCATS.—The thin-skinned Muscats, as Canon Hall and Muscat of Alexandria, also Madresfield Court, are very impatient of a stagnant atmosphere, especially moist, the two former varieties spotting and the latter cracking. They require fire heat until thoroughly ripe, with a free circulation of air in the daytime, and enough at night, with gentle warmth in the pipes, to insure a circulation of air and to prevent the deposition of moisture on the berries, being careful to admit air freely on fine mornings. Continue this until the Grapes are thoroughly finished, when a gradual reduction of temperature may be made to about 50deg at night. But there must not be any great hurry in this, as the Grapes put on colour long after they appear finished, and improve in quality so long as there are any leaves on the Vines. Keep the border moist by watering as necessary in the early part of a fine day, for though the leaves become yellow at the edges they have green parts that are more or less useful in elaborating and storing food. Moisture must be kept down by free ventilation; it is pent-up air with a sudden rise of temperature from sun heat in the early part of a fine day, or at any time, which causes moisture to condense on the berries and produce spot, when the berries speedily decay.—ST. ALBANS.

Kitchen Garden.

SPINACH.—A successional sowing of Prickly Spinach to stand the winter may be made, preferably in rows, as thinning out, weeding, and other cultural operations are more readily performed when the plants are in lines than otherwise. Seedlings well advanced from previous sowings should be thinned out, and weeds removed, plying the hoe between the rows to encourage growth.

YOUNG CABBAGE PLANTS.—From the earlier sowings there will be many plants ready for planting out, while others not yet large enough may be pricked out on a bed of fresh soil to strengthen for the final planting.

SEEDLING ENDIVE AND LETTUCE.—If the plants in the seed bed are crowded there should be no time lost in relieving them. The best plants must be planted out permanently on a sheltered border. Water well should the weather be dry.

BLANCHING ENDIVE.—Full-grown plants may soon be ready for use when blanched. There are various methods of carrying out the process. A commencement may be made only when the plants are dry, as if wet the foliage rots, especially the young and tender centres, which are the parts most appreciated. With some plants the leaves may be drawn together by

the points and tied over the hearts, but the more effectual methods are inverting pots, or laying slates over the plants. The exclusion of light soon brings them to the desired state of perfection, so a few plants only, according to the demand, ought to be dealt with at once.

TURNIPS.—A liberal sowing of seed may be made now in rows nine inches apart. The ground should be moderately rich and well pulverised, working some wood ashes into the surface. Form shallow drills with the back of the rake, and sow the seed thinly. Seedlings from former sowings must be thinned as soon as possible, carrying out the operation at several times until the plants stand at a reasonable distance apart.

BEANS.—Scarlet Runner Beans will continue to produce pods so long as those of a useable size are picked, and not allowed to remain to develop and produce seed. Of course, where dependence is placed upon home-saved seed an adequate number of pods should be left for the purpose. Beans being gross feeders, the ground on which they are growing soon becomes impoverished of food and moisture. Plenty of water and liquid manure ought, therefore, to be supplied now, laying down some manure as a mulching. On this the liquid food may be poured, as it serves well to convey the moisture, and also shades the soil, preventing it being hard baked by the sun.

LATE PEAS.—Healthy and vigorous rows of late varieties should be kept in that desirable condition by affording a mulching of manure down each side of rows. This will conserve the moisture, and keep the roots cool. When the pods have formed and are swelling give liquid manure.

POTATOES.—As opportunity offers from the present time the main crops of tubers should be lifted, commencing with those varieties which show signs of the haulm ripening. If disease shows itself at all the crop will be better out of the ground, so as to prevent the disease spreading. A dry period, if it can be secured, is best for Potato lifting, as the tubers may then be spread out in the open air to thoroughly dry before storing. Sort the tubers into sizes, giving the very smallest to pigs, or cooking them to use with poultry food.

CELERY.—The rows of well grown plants constituting the main crops may be gradually finally earthed. The leafstalk ought to be loosely secured before applying the soil, which must be thoroughly broken up and pressed round the plants with the hands, avoiding letting any drop into the centres. At the final earthing bring the soil to a sharp slope on each side the row, carefully compressing the sides smoothly with the spade to allow moisture to drain readily away.—EAST KENT.

Orchids: The Week's Cultural Notes.

As the last leaf is completed on such *Dendrobiums* as *D. crassinode*, *D. Devonianum*, *D. Pierardi*, and *D. Wardianum*, remove the plant to a lighter and airier position. This induces a restful state, followed in due course by free flowering. Just at first the water supply must be well maintained, but as the foliage turns colour and falls a very much smaller quantity suffices, just enough, in fact, to prevent shrivelling of the stems. If left too long in the growing quarters the plants break into a second growth inimical to flowering, as it breaks up the proper yearly cycle of growth, rest, and blooming.

Where resting Orchids, such as *Thunias*, *Anguloas*, *Dendrobiums*, and others, have been placed outside, a watchful eye must be kept on the weather. After the first week of September they are unsafe without at least the protection of a frame, for the nights are often bitterly cold even when no frost occurs, and the first-named Orchids especially are easily injured. *Cœlogynes* and *Cypripediums* in cold frames are best covered at night, removing the covering material the first thing in the morning, but in frames where a little warmth can be turned on at night they will be perfectly safe for a couple of months yet.

Preparations must now be made for a thorough overhauling, cleaning, and repotting or surfacing where necessary of the plants in the cool house. *Odontoglossums* of the *crispum* and *Pescatorei* types, *O. Halli*, *O. triumphans*, *O. luteo-purpureum*, and others should soon be emitting new roots from young bulbs, and if attended to in time these will run freely in the new compost, and soon re-establish the plants. Up to the time that they fill the lesser 60-sized or 3in pots small shifts only are necessary for these plants, but when strong and well rooted in these a somewhat larger shift is advisable, using 5in pots, but keeping the compost very thin over good drainage. Good peat and sphagnum moss or Belgian leaf soil is the best compost.

As the *Disas* go out of flower they must not be dried off, as they commence growing again almost before the old stems die off, and the young shoots want nutriment. Thrips are very troublesome to these showy and beautiful plants, necessitating constant cleansing. If they have been taken to the flowering house to bloom they will, quite probably be severely attacked. The removal of the old stems after they have ceased to be of value to the plant often has the effect of clearing many insects, but this must not be done while they are still green, or the crowns for next season will be weakened.—H. R. R.



* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion.

ABNORMAL BEGONIA FLOWER (Mrs. C.).—The form in the flower you send seems to be owing to concentrated vigour, causing a multiplication and monstrous growth of the stamens and pistils. These essential organs are becoming metamorphosed into true petals, as may be seen in the outer parts of the flower. Begonias often do this.

MELON LEAVES RUSTED (W. S.).—We examined the leaves carefully, but the microscopic scrutiny was fruitless, no fungous or animal pest being found. The plant was quite sound in the roots, root-stem, and stem above ground, the leaves only browned and died back from the edges, the older leaves having considerable traces of "rust," which is due to the very pernicious puncturing of the tissues by a mite (*Tarsonymus* sp.) and the mode of reproduction in the cuticular cells, this giving rise to the "rust," while the nature of the infection causes the leaves to die back from the edges and curving downwards probably serve the purpose of protecting the mite or its progeny from moisture. The mite is rather a common pest in green-houses and stoves, infesting *Pelargoniums*, particularly Ivy-leaved, and *Begonias*, while in stoves it is often very destructive to *Gesneras* and *Gloxinias*, the foliage, usually stunted and rusted, for the most part ruined. In recent years the mite has attacked a number of plants, commonly those with fleshy or hairy leaves, and in rare instances attacks Melons. The only known preventive and repressive means is spraying with tobacco water, 1oz of the strongest shag tobacco being placed in a vessel and a quart of boiling water poured on, covering up closely and allowed to stand until cool, then straining and spraying on, it being important to wet the foliage on the under side. Probably in your case the mite has come from other plants, the house being more or less infested, hence spraying the whole structure inside would be advantageous, the tobacco juice of dealers diluted to a safe strength being used. It is necessary to repeat the spraying occasionally, it being more effective than tobacco smoke or nicotine vapour.

PEAR TREES GOING OFF (C. W. R.).—From the data, but in the absence of specimens, I should say that the trees are infested by a fungus closely allied to, if not identical with, that known as Cherry Leaf Scorch (*Gnomonia erythrostoma*), a disease which every now and again proves destructive to the Cherry crop in various parts of Europe, and I have noticed its occurrence on Pear trees in North Yorkshire and also in Hertfordshire. The leaves are attacked usually early in June, soon presenting a scorched appearance, withering, but hanging on to the tree throughout the winter in the case of the Cherry, while in that of the Pear the leaves commence falling towards the end of summer, though in some cases they hang on late; even here and there twigs are seen over winter with the withered leaves still adhering. Long, slender, colourless, curved conidia are first produced in perithecia seated on discoloured spots on the leaves. During the winter the ascigerous form of fruit is also produced on dead, hanging (or fallen, in the case of the Pear, if not Cherry) leaves, and the spores liberated start the disease anew.

If this be the affection, all the dead, infected leaves hanging or fallen, must be collected and burned. This, to be effectually preventive, must be general throughout the infected district. Where carried out thoroughly for two seasons, the Cherry or Pear crop, which previously has been completely ruined, may be restored to its former productiveness.

As regards the Pear trees being struck by lightning, I have no knowledge nor can I find record of such occurrence. Indeed, it hardly seems likely, as "C. W. R.'s" trees are affected similarly to a neighbour's on much higher ground, and I assume a considerable distance away. Lightning is local, seldom striking trees over a wide area, the greatest I have seen being with Lombardy Poplars, and then not more than ten yards, the central tree of three being killed entirely, and now covered in part with Great Bindweed (*Convolvulus sepium*) beautifully in flower, while the trees on right and left respectively are only scorched on the side next the killed tree, and most at top, this

part being more or less killed, but the other side and lower part pushed new growths freely.

Possibly the Pear trees may have been struck by lightning, but I hardly think the data conclusive, the evidence of exudation on one tree not indicating electrocution, for it is of a burning, dry nature. Indeed, the affection points to fungoid origin, and most likely is that foreshown. If so, the trees will push new growths another season; and if lightning it is remarkable the trees have not started into new growth from the sound parts of the wood this summer, as it seldom occurs of trees being killed outright over a wide area, and even individual trees are not always killed by lightning, but in part only, and then new growth pushes from the sound living parts.

SHIFTING YOUNG PELARGONIUMS (Inquirer).—If they are Zonals they should, when the small pots are filled with roots, be transferred to 6in pots, potting firmly, placing them in a light position, and with a little heat the plants will flower in winter. If, however, they are of the Show, Spotted, or Fancy section, they may also now be repotted and have the shoots stopped so as to induce a branched habit, keeping them near the glass and the house freely ventilated.

SPENT TAN (Ramalho).—Such old "rotten" tan as you describe has very little manurial value. If the tan is in a friable state it may be applied beneficially to very heavy land, such as clay or strong loam, but no benefit will result if it is mixed with ordinary light garden soil. Some pastures we have known to have been benefited by a heavy dressing of old tan, and this is possibly the most likely way in which your heap may be utilised—that is, if you have no heavy garden ground that requires to be made more friable.

Covent Garden Market.—September 9th.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, Italian, per pad	4 6	to 5 6	Pears, Williams, 48's,		
" cooking, bush.	5 0	6 0	per case ...	8 0	to 10 0
" dessert, ½-bush.	5 0	9 0	" small, ½-sieve ...	6 0	7 0
Bananas ...	10 0	15 0	Pines, St. Michael's	3 0	5 0
Grapes, Alicante, lb.	1 0	1 3	Plums, Rivers', ½-sieve	8 0	9 0
" Hamburgh ...	1 0	1 6	" Orleans, "	9 0	10 0
Lemons, Messina, case	10 0	15 0	" Victorias, "	8 0	9 0
Oranges, case ...	10 0	15 0			

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 0 0	Leeks, bunch ...	0 2	to 0 2½
" Jerusalem, sieve	1 6	0 0	Lettuce, Cabbage, doz.	1 0	0 0
Batavia, doz. ...	2 0	0 0	Mushrooms, forced, lb.	0 8	0 9
Beet, red, doz. ...	0 6	0 0	Mustard & Cress, doz.		
Cabbages, Spring, tally	2 0	3 0	punnets ...	1 6	0 0
Carrots, bunch ...	0 2	0 0	Onions, bushel ...	3 0	0 0
Cauliflowers, doz. ...	2 0	3 0	Parsley, doz. bnchs.	2 0	0 0
Corn Salad, strike ...	1 0	1 3	Peas, bushel ...	4 0	5 0
Cos Lettuce, doz. ...	1 0	0 0	Potatoes, cwt. ...	5 0	6 0
Cucumbers doz. ...	2 0	3 0	Radishes, doz. ...	0 9	1 0
Endive, doz. ...	1 6	0 0	Scarlet Runners, bush.	4 0	5 0
Herbs, bunch ...	0 2	0 0	Spinach, bush. ...	2 0	0 0
Horseradish, bunch ...	1 3	1 6	Tomatoes, English, lb.	0 3	0 4
			Turnips, bnch. ...	0 0	0 2

Average Wholesale Prices.—Plants in Pots

Most of the undermentioned plants are sold in 48 and 32-sized pot					
	s. d.	s. d.		s. d.	s. d.
Aralias, doz. ...	5 0	to 12 0	Grevilleas, 48's, doz. ...	5 0	to 0 0
Araucaria, doz. ...	12 0	30 0	Heliotrope ...	4 0	6 0
Aspidistra, doz. ...	18 0	36 0	Hydrangeas, pink ...	12 0	0 0
Crotons, doz. ...	18 0	30 0	" white ...	12 0	18 0
Cyperus alternifolius			Lycopodiums, doz. ...	3 0	0 0
doz. ...	4 0	5 0	Marguerite Daisy, doz. ...	6 0	0 0
Dracæna, var., doz. ...	12 0	30 0	Myrtles, doz. ...	6 0	9 6
" viridis, doz. ...	9 0	18 0	Palms, in var., doz. ...	15 0	30 0
Ferns, var., doz. ...	4 0	18 0	" specimens ...	21 0	63 0
" small, 100 ...	10 0	16 0	Pandanus Veitchi, 48's,		
Ficus elastica, doz. ...	9 0	12 0	doz. ...	24 0	30 0
Foliage plants, var, each	1 0	5 0	Shrubs, in pots ...	4 0	6 0

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.
Arums, doz. ...	2 6	to 3 6	Lily of Valley, 12 bnchs	9 0	to 12 0
Asparagus, Fern, bnch.	1 0	2 0	Marguerites, white,		
Carnations, 12 blooms	0 6	1 0	doz. bnchs. ...	1 0	2 0
Cattleyas, doz. ...	10 0	12 0	" yellow, doz. bnchs.	1 0	0 0
Croton foliage, bun. ...	0 9	1 0	Myrtle, English, bunch	0 6	0 0
Cycas leaves, each ...	0 9	1 6	Odontoglossums ...	4 0	0 0
Eucharis, doz. ...	1 6	0 0	Orange blossom, bunch	2 0	0 0
Gardenias, doz. ...	1 6	2 0	Roses, Niphetos, white,		
Geranium, scarlet, doz.			doz. ...	1 0	1 6
bnchs. ...	3 0	4 0	" pink, doz. ...	1 0	2 0
Gladiolus, The Bride,			" yellow, doz. (Perles)	1 0	2 0
doz. bun. ...	1 6	2 6	" Liberty, doz. ...	2 0	0 0
Ivy leaves, doz. bun. ...	1 6	0 0	" Generals ...	1 0	1 6
Lilium Harrisii ...	1 6	2 6	Smilax, bunch ...	2 6	3 0
Maidenhair Fern, doz.			Stephanotis, doz. ...	1 6	2 0
bnchs. ...	4 0	6 0	Tuberose, gross ...	2 0	3 0

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1903.										
August and September.										
Sunday ...30	W.	deg. 59.9	deg. 56.8	deg. 64.9	deg. 49.0	Ins. —	deg. 62.0	deg. 60.8	deg. 58.9	deg. 42.5
Monday ...31	W.	62.5	57.0	71.0	58.0	—	62.0	61.0	58.9	56.5
Tuesday ... 1	S.	68.3	58.7	81.7	52.3	—	62.3	61.3	58.9	47.0
Wed'sday 2	S.E.	73.5	67.0	82.2	58.9	0.02	65.0	61.9	59.0	54.0
Thursday 3	S.W.	63.4	57.5	69.0	50.3	—	65.3	62.7	59.1	43.3
Friday ... 4	S.W.	66.7	60.5	71.2	48.0	1.39	63.2	62.5	59.4	42.5
Saturday 5	S.W.	61.7	61.4	69.5	60.6	—	64.0	62.5	59.6	57.2
MEANS ...		65.1	59.8	72.8	53.9	Total. 1.41	63.4	61.8	59.1	49.0

The week opened with fine, bright, and warm weather, becoming less settled towards the end, very heavy rain falling on the evening of the 4th, accompanied with thunder and very vivid lightning.



1879 as Against 1903.

Why, the reader will ask, are these two years treated of together? Twenty-four years apart, a good many of us have but vague remembrance of 1879. It was not a Jubilee year, a Coronation, or a great war; no public feature of any mark. But, nevertheless, it is a time well remembered by those who were unfortunate to be farming then. We were going to say by those farming in the northern half of the kingdom; but, really, the disasters of that year were so evenly distributed that each and all got a fair share. What were the leading characteristics of 1879? Cold, wet, storm, lack of sunshine—a formidable array. In 1878, from June onward, the weather was unusually wet, causing a late harvest, and also affecting the well-being of lambs. It was not at all an unusual occurrence to find several lambs dead in the folds, or dying, more mornings in the week than was at all pleasant, and those which recovered were by no means in good condition to withstand a severe winter. Very early did winter set in (1878-79), and a very severe period it was, and of long duration. Practically up to Easter, 1879, it was all winter. We can even at this distant date remember how few days there were that could by any courtesy be spoken of as "spring weather," and Easter Day was ushered in by a snowstorm. The land being so wet and cold for such a length of time, was most unfavourable to the growth of Wheat, and many, many acres were ploughed up and re-sown with Barley or Oats. These crops, experiencing such continued wet, made straw, and little else. June came; still downpour. July followed with a few fine days, but these not till quite the end of the month. To show the lateness of the season, we may remark that in a well cultivated Midland garden there were no new Potatoes till the end of July, and Strawberries were equally late, even the earliest varieties (this before the days of The Noble). It was a case of hay making under difficulties, and the hay eventually secured was of the poorest quality.

In an article—"Daily Telegraph," August 31—it is stated that June, July, and August of this year (1903) have been better than the corresponding months of 1879, though the crops of '79 were worse. Now, we must not go against figures, but we really believe 1879 was a far wetter season. The harvest of 1879 was late in beginning, and on our farm not a stack was begun till Saturday, September 27, when leading was started; further North we dare not inquire. As to the fruit crop, it was plentiful; only Plums never got

to taste really ripe, and Apples, though large, were devoid of flavour. Nuts were most abundant, but English Walnuts never got beyond the stage of semi-ripe; the kernels never filled out at all. The mortality in lambs was great, but not so great as in the preceding year. The worst sheep trouble was yet to come, and come it did in 1880, when liver fluke made its appearance, and sheep in the low, damp districts succumbed in their thousands. On the higher grounds the mortality was not so severe.

If the corn harvest was late in 1879, what of the Potato harvest? It was prolonged into winter. The haulms refused to wither, the skins refused to fasten, but the tubers did not refuse to decay. There were absolutely no really fine, dry days for Potato getting, and therefore the tubers were stored wet and with a superabundant covering of earth, both most undesirable concomitants. It was impossible to thresh early, no corn in any way approaching condition, and all grain of every sort was sadly discoloured. We believe on many northern farms the grain crop was only fit for bedding. To set against all this disaster and loss, wool was a much better price than it has been for many years; but wool was a poor peg on which to hang all the farmer's prospects. The effect on farmers generally was very bad. Many received then what was practically their death blow, and laid up for themselves liabilities that neither they nor their heirs were ever able to discharge. Happy those men who got out of the business at some sacrifice; the first loss was the least. Revenue disappeared as thoroughly as though invested in an unlimited company.

Since the bad season of 1879, and also on account of the continued fall in prices, the cultivation of the corn crop has seriously diminished. The bad prices for wool resulted in a lessened head of sheep, which is in reality a double loss, for the sheep not only gives of its wool and mutton, but most materially adds to the fertilisation of the land that sustains it. The diminution of the Wheat area between 1874 and this present year of grace is something like 2,000,000 acres, and the Barley area has diminished in like proportion. Only Oats have increased, and they have done so by about 1,000,000 acres, roughly speaking. More easily cultivated, and less liable to damage, and more available for stock foods, Oats have carried the day. Yet, with all this lessened work on the farms, with increased mechanical appliances, labour is dearer, more scarce, and worse than it has ever been known.

These twenty-four years have seen much real steady progress made in the dairy farm industry. Not now an adjunct to mixed farming, it is generally conducted as a separate business; and where business habits have been brought to bear, where intelligent breeding of stock for milking purposes is thoroughly understood, the dairy farmer has been enabled to keep his head above water. But it is not every man who is qualified to take up dairy farming; it is a truly complex business, and one demanding the very best qualities and shrewdest abilities.

Many of us are still in the throes of harvest, and how it will end we know not. All we can say with any certainty is this: That harvest expenses are mounting up day by day, and we have no power to lessen them. The weather that adds to the expense also takes away from the value of the crop, and this is a problem in arithmetic that does not take much working out; i.e., loss of a serious nature to the farmer. So far our root crops look well, with, perhaps, the exception of Mangolds, which thoroughly appreciate warm moisture. We fancy our brethren with many acres of Potatoes will be trembling in their shoes, the only thing in their favour being the drying winds which alternately come and go, lowering the temperature. Mushroom weather favours the growth of other fungi beside the delightful edible variety. There is another bright spot, the small rise in the value of home-grown wools, and those men who have by means of their healthier banking accounts been holding on for the last few seasons will now be able to have a nice sum of money in hand. Mind, we are still of opinion that storing wool is not desirable, yet in the face of such shocking bad prices there is much inducement to do so, rightly or wrongly.

There is a certain religious service in which the participants are told to speak at once or for ever to hold their peace. Are we not now on the verge of a crisis? Mr. Micawber would say so, and we think it is now time we spoke, and that with no uncertain voice. Since 1846 we have been Free Traders, with the rest of civilised nations

against us. Since 1846 we have passed through more than half a century, a period that has seen more change and development in the conditions of life than any previous period in the world's history. All other methods of procedure existing in 1846 are now practically obsolete and antique, and not adapted to modern day requirements; and yet in this single instance we stand still, and what ought to be and what used to be our chief industry is crippled and disabled. It is all very well to talk of the growth of manufactures. Manufactures cannot exist without the artisan, and the artisan cannot exist without food; and we as a nation are year by year steadily declining in our food producing, trusting more to outside help than we have any business to do. No other nation is so blindly foolish as we. We receive far more than we send out, and our credit balance does not exist. We do not deny that more food might, and should, be produced within the limits of our shores; but there is no encouragement to do so. A rise of 10s. per quarter for Wheat would do more to bring back into cultivation derelict land than the sound of war's alarm, come it ever so nigh, and would also be a stimulus to more intense cultivation. Ten, or even fifteen shillings per quarter would not make a dear loaf, and a cheap loaf is a poor thing if it spells ruin to produce it.

We hear ominous rumours; a general election cannot be far off. We shall have pleasant gentlemen tearing through country lanes in their motors, anxiously soliciting our vote and interest. It is not war this time in foreign lands; it is a question of our own existence. And we think we shall be justified in according to no candidate our support who does not pledge himself to consider the agricultural situation and bring our commodities under the sheltering wing of Protection. One single protestor can do nothing; we must be prepared at this juncture to sink all party feeling, to band ourselves together as one man throughout the length and breadth of the country to go for Protection, and not be led off the scent by any side issue.

Work on the Home Farm.

We have had a very trying time lately, but have managed to get the greater part of our corn cut and stooked up. With no more reaping requiring immediate attention we had meant to have three full days at leading. The influence of a fine day and brisk wind had put Wheat into good condition, but everything is drenched this morning, and the men are in the granary mending sacks, except the horsemen, who are leading manure on to seeds. Wheat generally is good where there is no bunt, but every day we hear new complaints of its prevalence. Barleys have not stooked up as heavy as we had expected, but all the earlier sown crops are of good colour, and if soon stacked will make fine malt. Those not yet cut are losing colour with every shower.

We hear of a motor binder at work a few miles away, but have had no opportunity to go and see it. If we can plough and reap without horses we shall soon do everything by motor. It will be a bad day for the Oat trade. The recent imports of hay and fodder were but forty per cent. of those for the corresponding period of 1902. Yet the trade here is absolutely stagnant, even at low prices. Surely the influence of the motor invasion is already felt. There is a poor prospect before hay growers.

The broken harvest weather has given opportunities for sending off small consignments of Potatoes, chiefly British Queen. They are good crops and of good shape and quality, but decided signs of disease appear. Several fields of Dates are beginning to show brown patches, and there is a good deal of disease in the gardens.

The lambs are folded on Cabbage, and doing very well, but some of our neighbours are not so fortunate. One farmer is running his lambs on uncleared Barley stubbles, with a couple of boys to keep them off the stooks as much as possible. They get a good deal of wholesome picking, especially on the hedges where there are Brambles. There is nothing better for them than Bramble leaves. A day's driving along the lanes will often do wonders to sickly lambs. Where large numbers are kept an excellent course is to have all the sickly or weak ones in a flock by themselves; and specially nursed like human beings in an infirmary.

Using a Gun on a Motor Car.

One of the leading farmers in East Lothian, during the last few weeks, has had as a neighbour a Londoner, who drives a motor car. They repeatedly met on the road, and the farmer to protect his horses, held up his hand as a signal to the motorist, who, however, paid no attention, and drove his car at full speed. His signals having been several times disregarded in this way, the farmer became incensed, and on the next occasion of their meeting he burst the tyres of the motor car by firing the contents of a rifle into them. The owner of the car is endeavouring to get the police to take the matter up.

PLANTING SEASON



PAULS' ROYAL NURSERIES WALTHAM CROSS, HERTS.

12 miles from London. South Entrance four minutes' walk from Waltham Cross Station; West Entrance three minutes' walk from Theobald's Grove; both Stations on the Great Eastern Railway.

SPECIALITIES:

- ROSES** in all forms, from open ground and in pots. Gold Medals in 1903 from Royal Horticultural and Royal Botanic Societies.
- FRUIT TREES** for the Orchard, Garden, and Forcing House. Hogg Memorial Medal, 1901.
- HARDY TREES** for Streets, Parks, and General Planting. Silver Medal from Royal Agricultural Society of England.
- SHRUBS**, both Evergreen and Deciduous.
- CLIMBING PLANTS**, Hardy and Greenhouse.
- RHODODENDRONS, CAMELLIAS, & AZALEAS.**
- HERBACEOUS PLANTS** in great variety.
- BULBS and SEEDS**, and all Garden Sundries.

PRICE LISTS ON APPLICATION. INSPECTION INVITED. Upwards of 1000 Medals, Prizes, and other Awards at leading Exhibitions during the past 42 years.

SOLE POSTAL ADDRESS—

WM. PAUL & SON, WALTHAM CROSS, HERTS. Rose Growers by Appointment to His Majesty the King.

TO THE TRADE! DUTCH BULBS FRENCH BULBS! and ENGLISH BULBS! SEE OUR SPECIAL CATALOGUE OF BULBS.

Containing List of all the Best Varieties of HYACINTHS, TULIPS, CROCUS, LILiums, DAFFODILS, SNOW-DROPS, IRIS, PÆONIES, &c., free on application. Please compare our prices before sending your orders abroad.

WATKINS & SIMPSON, SEED AND BULB MERCHANTS, 12, TAVISTOCK ST., COVENT GARDEN, LONDON, W.C.

SPECIAL OFFER.

Having very large stocks of the following, we offer them at specially low rates. All are of the very finest quality; well grown, clean, healthy, and are sure to give satisfaction.

- Aralia Sieboldii**, a very handsome and hardy-foliaged plant for room decoration .. 1/-, 1/6 and 2/6 each.
- Begonia, Gloire de Lorraine**, bearing masses of beautiful pink flowers. Fine plants for flowering in October and onwards .. 1/6 and 2/6 each.
- Begonia, Mrs. Leopold Rothschild**, similar to B. GLOIRE DE LORRAINE, but having larger and brighter coloured flowers .. 1/6 and 2/6 each.
- Carnation, Duchess Consuelo** (DICKSONS). The finest large-flowering yellow Tree Carnation in cultivation.
- Do., healthy young plants, well established in 3in. pots. 9/- dozen.
- Carnations**, Tree or Winter Flowering varieties, in all the best sorts, for flowering during winter and early spring .. 18/- and 24/- dozen.
- Cinerarias, Single Chinese Primulas, Herbaceous Calceolarias**, fine sturdy plants in 2 1/2 in. pots, just ready for potting on, all from finest strains. 3/- dozen; 21/- 100.

DICKSONS Nurseries, CHESTER

No. 1212.—VOL. XLVII., THIRD SERIES.

BEAUTIFUL FLOWERS IN WINTER AND SPRING.

WEBBBS' POPULAR COLLECTIONS OF BULBS.

TO SUIT
ALL REQUIREMENTS.

The Finest Selection from the best Bulb Farms of Holland.

- COLLECTIONS FOR BEDS AND BORDERS**
From 5/- to 105/- each.
- COLLECTIONS FOR POTS AND GLASSES**
From 10/6 to 105/- each.
- COLLECTIONS FOR THE GREENHOUSE**
From 5/- to 42/- each.

WEBBBS' BULB CATALOGUE,
Beautifully Illustrated. NOW READY.
SEEDSMEN TO H.M. THE KING,
Wordsley, Stourbridge

STRAWBERRY PLANTS.

All the Leading Varieties from the open ground and in pots.

Priced Descriptive Circular Post Free.

DICKSONS Nurseries CHESTER

R. D. Blackmore's PEACH—"LIBRA." AWARD OF MERIT R.H.S.

Late mid-season; very large and heavy; average width 3 1/2 in., height 4 in., weight 10—11 oz. Apex depressed; lobes unequal; suture shallow. Skin of a beautiful rich creamy colour, daintily flushed with crimson. Fine melting flesh, which separates freely from the stone; rich brisk flavour, and very juicy. Of the Seedling Peaches raised by the late Mr. R. D. Blackmore this is the one he selected for distribution to his fellow fruit-growers. It has already proved itself of great value to follow the earlier and smaller varieties under glass. As soon as it becomes known it will be indispensable to market-men on account of its size, high quality, and its crimson and cream coloured skin, which is very distinct, and produces a goodly appearance.

Large trained Trees, with well-ripened fruiting wood, 31/6. Maidens, 21/-. Direct only from—

Will Tayer, Hampton, Middlesex.

1500,000

BULBS.

Spanish Iris, Yellow, White, and Blue	7/6 per 1000.
Crocus, all colors	5/- per 1000.
Sir Watkin Narcissus	5/- per 100.
Horsefeldii	5/- per 100.
Trumpet Narcissus	7/6 per 1000.
Glory of Leiden Narcissus	6d. each.
Madam de Graaff	3/- each.
Sweet Scented Pheasant Eye	
Narcissus	5/- & 7/6 per 1000.
Mixed Narcissus	5/- per 1000.
Double Daffodils	5/- & 10/- per 1000.
Tulips, Mixed (choice)	2/- per 100.
Single Lent Lilies	3/6 per 1000.
Snowdrops	5/- & 7/6 per 1000.
Strawberry Plants	1/- per 100.

SEND FOR LISTS BEFORE ORDERING ELSEWHERE.

Cross & Son, Daffodil Nurseries, Wisbech.



Journal of Horticulture.

THURSDAY, SEPTEMBER 17, 1903.

Pear Trees on Gable-ends.

WALLS, often costly ones, are built specially for fruit trees; but they are not always attended with the best results, while the warm, dry walls of both domicile and out-buildings are often better calculated for the culture of the trees than the garden walls. In this respect no more suitable position than a gable end is adapted for the cultivation of, more especially, the vigorous varieties of Pears, requiring, as they do, ample space for their successful development. If properly selected varieties are grown, they will yield a profitable supply of useful fruits. The gable walls of houses, or other buildings, also possess an advantage over ordinary walls, in the fact that no danger of drippings from the roof occurs, which obtains from walls unprovided with spouting or gables. And oftener than not it happens that the chimney-flue of the kitchen or daily residing room runs up the gable end, thus affording an economical provision for the maturer ripening of the wood. Moreover, the warmth is a protective against frost, and the fruits ripen early, especially those immediately in proximity to the direction of the flue; this also prolongs the duration of the crop.

Beyond this, what is handsomer than a fruit tree, the Pear especially, whether in leaf, flower, or fruit, against the gable wall of a villa, cottage, farm buildings, stable, coach house? The triangular form of the gables will naturally equalise, especially the espaliers, which are proposed to be trained against them.

Any other form, however, would be suitable, excepting in the case of naturally strong growing varieties of Pears, and it is to the Pear that we more particularly allude. The horizontal form of espalier specially lends

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

itself to equalising the growth of the branches, and affording a style of contour in agreeable harmony with the geometrical plane of the gable wall.

Uvedale's St. Germain Pear is an exceedingly vigorous sort, and produces enormous fruits, almost like Swede Turnips. A specimen I have in my mind's eye is growing against one of the four gable ends of the commodious stables at Weston House, Shipston-on-Stour, in South Warwickshire, the splendid seat of the Earl of Camperdown. The tree must be more than an octogenarian, inasmuch as upwards of half a century ago the writer recollects that it was then almost, if not quite, as large as at the present time. Nevertheless, good crops of fine fruit have been annually borne, and I have a vivid recollection that in my aspiring early "teens" I was privileged by my father to "try my 'prentice hand" on fruit tree pruning and training by commencing upon the veteran in question.

The gable has a southern aspect, which no doubt materially contributes to the fertility of the tree. Mr. John Masterson, the competent gardener at Weston House, courteously gave me a photograph of the tree, which the *Journal of Horticulture* reproduced in 1902. The total weight of the crop of fine fruits (some of them nearly 2lb each in weight) was at that time 2cwt. Many first prizes have been won from the tree, including first at the Crystal Palace Show in 1894 and 1895. The tree has never been fed with stimulants, nor has it been root-pruned, and its roots are in the bed of a wide carriage drive leading to the back premises of the mansion. Gravel encircles the base of the stem, where it measures 6ft in circumference. Doubtless the roots have rambed a considerable distance, and also come in contact with the stable drains, thus deriving the nourishment required by so large a tree.

The principal front of the stables, facing east, was formerly furnished with fine old fan and espalier shaped Pear trees, now supplanted by a mantle of *Pyracanthas* and *Ivies*, planted some twenty years ago. The kitchen garden walls at Weston House are also furnished with many fine old Pear trees. Fig trees used to bear very good crops of fruit at Weston, and a long wall is furnished with them. Another long and high wall, leading into the kitchen garden on the far side of the stables' chief front, was formerly clad with Figs, but is now appropriated to Apricots.

Amongst the numerous instances of notable gable end fruit trees, one of the most remarkable recently subject to the notice of the writer was a fine specimen of a tall tree of Marie Louise Pear, growing against the high gable end of one of the garden offices at Elvaston Castle. The tree is about 34ft high, and was laden with fruit, and was also at the time the heaviest laden Pear tree in the gardens there.

In the choice of varieties suitable for gable ends or similar spacious walls, the grower must be controlled in a great measure by the aspect; but in nearly every case they should be vigorous growing varieties grafted on tall, free stocks. The latter proviso, however, is not essentially necessary, excepting that a tall stem affords a better means of regulating the growth of the branches, and also by allowing the basal ones to be trained in a downward direction, and thus furnish the lower portion of the wall with fruit bearing shoots, not so readily available by the fan system.

One of the most suitable varieties for a north aspect is the prolific *Beurré d'Amanlis*, which, being a vigorous grower, would soon fill the allotted space. *Williams' Bon Chrétien* also is a suitable variety for the aspect indicated, and whereby a longer succession of this popular Pear may be acquired. For a western aspect *Louise Bonne* of Jersey is one of the best, and *Pitmaston Duchess*, also its prototype *Duchesse d'Angoulême*, which is well adapted for an eastern aspect. Of course, there are several other varieties suitable for the different aspects (for a south aspect *Passe Colmar* may be mentioned), but I have named the best of the several varieties adapted for this position.—W. GARDINER.

Crown Imperials.

This is *Fritillaria imperialis*, a hardy bulbous plant which does well in a shady border, in deep, rich, rather adhesive soil. The flowers are drooping and bell-shaped. The bulbs may be planted now 4in to 6in deep, in groups of three or four. They will need no further attention for several years, with the exception of an annual top-dressing of decayed manure.—S.

Edible Fungi.

Said a visitor to me in the Drill Hall on Tuesday: "What are they doing with these things here?" We were looking at Dr. Cooke's coloured drawings of twenty edible Fungi, and in a few words I told the man. I said Dr. Cooke wants us to study these, and use them for food, and he has described them to us. Before the man left me (he grows Orchids) he asked, "And where is the one that is poisonous?" Such simplicity, alas! is too common amongst us.

But that there are large numbers of men and women at work studying Fungus growths—certainly with various objects in view—the meeting convened last Tuesday in the James Street Drill Hall, Westminster, gave ample proof: they were there with notebooks, handling, smelling, examining the species in the numerous collections. Moreover, there has been no such crowded audience in the Drill Hall for months.

Dr. Cooke (the record of whose surprisingly varied life from solicitor's clerk to Board teacher and botanist, in England and America, we gave in 1902) began his remarks by stating that he meant to be popular, rather than severely scientific, in the treatment of his subject. There are four chief groups of edible Fungi, *Agarics*, *Morels*, *Truffles* and *Puff Balls*. Briefly tracing the life history of a type plant (the common Mushroom, *Agaricus campestris*), he then quickly ran through the following list, pointing out the prominent characters, and gave some facts of their history, properties, and commercial or domestic importance. Thus—

Agaricus campestris; *A. c. sylvicola*; *A. villaticus*, the Giant Mushroom; *A. elvensis*, Scaly Mushroom; *A. arvensis*, or Horse Mushroom; *A. hæmorrhoidarius*, the Bleeding Mushroom.

Tricholoma gambosa, St. George's Mushroom; *T. personata*, or Blewits; *T. nuda*, or Blue Caps.

Clitocybe nebularis, the Dusky Caps; *Lepiota procera*, the Parasol Mushroom; *Coprinus comatus*, Shaggy Caps; *Cantharellus cibarius*, the Chantarelle; *Marasmius oreades*, the Fairy-ring Champignon.

Boletus edulis, the Edible Boletus; *B. scaber*, the Rough-legged Boletus; *Morchella* sp. (Morels); *Helvella lacunosa*, the Dusky Helvella; *Lycoperdon bovista*, the Giant Puff Ball.

All the drawings were by Dr. Cooke himself.

"If the mystery of cultivating edible Fungi," said Dr. Cooke, "could be discovered, we should be able to cultivate many species." He himself has eaten eighty species, all more or less wholesome. The cultivated Mushroom (*Agaricus campestris*) is a most widely spread species. It is found in Siberia, Northern India, Mongolia, Ceylon, North and South America, South Africa, Oceania, Tasmania, and everywhere, indeed, if a suitable climate exists. It is recognised as good for food in a number of countries. The Chinese, he remarked, cultivate a number of species of Fungi, but it is not known whether this is included.

The common Mushroom is subject to considerable variation, and numbers of well-marked forms are known to experts. One of the best known is *A. c. elvensis*, well known in Italy. Another is *A. c. sylvicola*, commonly found in our own woods, and has a white cap or pileus, smooth like a glove.

The lecturer emphasised the strong need to cook *Agarici* as soon as possible after they are gathered. "In the morning, with the dew still upon them," is the best time; and he further stated that many cooks did not know how to properly preserve their goodness; in short, how to cook them. A reverend gentleman, at the end of the address, said that he had tasted all the kinds of edible Fungi Dr. Cooke had mentioned, and he thought it hardly safe to eat some of them. The Puff Ball, for instance, in the cooking gave off powerful fumes. The essayist again reiterated his plea for cooking while the samples were perfectly fresh. True, many stomachs are highly sensitive; he had even known a person the skin of whose hands became inflamed by handling the cultivated Mushroom; and he went on to observe that the chemical ingredients of the Fungi change on undue exposure to the air, making them deleterious if the change is carried far enough. Some folks thought that all edible *Agarics* and edible genera generally, had a flavour akin to that of *Agaricus campestris*, and that this was one means of identification. Dr. Cooke, on the other hand, stated this to be unreliable, as many species have decidedly distinctive flavours. There is no Royal road to a knowledge of good and bad, poisonous and non-poisonous kinds: they must simply be studied, until one gets to know them.

Numerous enquiries were heard for a good text-book, in order to learn something more of so fascinating a subject. Students in reach of London can get a List at the Natural History Museum, Cromwell Road, South Kensington. The Society for the Promotion of Christian Knowledge, London, publish coloured plates of life-sized specimens, mounted on cloth, price one shilling each.

(To be continued.)

**Cypripedium × Constance.**

This is one of a trio of hybrids raised by Mr. Drewett, Riding Mill-on-Tyne, in 1890, and comes from *C. Stonei* × *C. Curtisii*. The dorsal sepal is white with purplish streaks, the petals are 3½ in long, pale yellow, with brownish purple dots, and a few marginal hairs. The lip resembles *C. Stonei* in shape and colour. The hybrid is possessed of free flowering qualities. The illustration is interesting as showing what may be expected from the hybridising of these two well-known species.

The Week's Cultural Notes.

In autumn there would appear to the uninitiated very little to do in the Orchid houses, and although this is to a certain extent true, it is an anxious time to the careful cultivator, who likes to get the best possible results. There are so many species under his eye, and they need such varying treatment. He will be noting the backward state, say, of *Cattleya Mossiae*, and know that it wants rushing on to a finish as soon as possible; or, *C. Bowringiana*, repotted recently and throwing out its roots, will be in need of extra warmth. Yet, in the same house are others of the spring flowering type that must be kept dormant.

The best positions where light and heat are most plentiful will, of course, be set apart for the former class of plant, and in some cases a little extra fire heat will be turned on; but with this, as with other details, much circumspection is needed. The same with watering. No overhead moistening can be permitted from now onwards, and even at the root of most species the supply will be considerably curtailed. Damping the floors and stages must go on, but it will not be so frequently necessary, as the external conditions are not so dry, and the atmospheric moisture leaves the house more slowly. But Orchids are more easily overwatered at the root than in the atmosphere.

Especially is this the case now with *Phalænopsis*, root action being often checked instead of facilitated by pouring water about the compost. Among *Vandas*, *V. cærulea* and *V. Sanderiana* are producing flower spikes, and both should be kept moist as yet. But the temperature required is quite different, the former liking ample heat, while the blue flowered species does better in a cool intermediate house. *Saccolabiums* of the *Blumei* and *retusum* section need a drier atmosphere now, as do also *Ærides*, *Angræcums*, and the taller growing *Vandas*.

Light, in its effect upon Orchids, is not always sufficiently thought of by amateur growers, or the glass would be kept cleaner. Now that the days are shortening, the cleansing becomes doubly important, and a lull in the routine work allows of a thorough job being made of it. Only a small portion of a house can be taken in hand at a time, as it is not well to crowd up the plants at one end while the cleaning is in progress. Having removed the plant, thoroughly moisten the roof, glass and woodwork, with warm water; then scrub all the paint work thoroughly with softsoapy water and paraffin, sponge the glass inside and mop the outside. A coating of limewash to the inside walls is of benefit, and the material used on the stages should be turned and sifted. —H. R. R.

Lifting Plants from the Open Ground.

The plan of planting out subjects for the summer season to be lifted and potted for the greenhouse has many points to recommend it. The work entails some labour at this season because the plants, to succeed, must be established before frost comes, and placed safely under glass.

To achieve the best results, the planting-out should be done in the first instance with a view to lifting and potting in the autumn, hence the situation selected will be open and exposed to sun and air. This will induce a stocky growth. Plants which readily lift are *Chrysanthemums*, *Salvia splendens*, *Richardias*, *Eupatoriums*, *Solanums*, *Bouvardias*, *Heliotropes*, and *Lobelias*.

The best *Chrysanthemums* for lifting and potting are the dwarf habited early Japanese, pompons, and late varieties. If grown two feet apart on good soil they have plenty of room. About a fortnight before lifting (which may be done when the buds show) run a spade all round each plant at half a foot from the stem, and follow with a watering. Prepare a number of 7, 8, and 9 inch pots with proper drainage, and have them in readiness. When lifting, reduce the ball of soil and roots, giving as small a

pot as possible. Drop the ball in about half-way; then, with a little dexterous jarring of the bottom edge of the pot on a firm base of soil or wood, the ball of roots may be worked down in position.

Give a thorough watering to moisten the whole mass, and stand the pots in the shade until established. Lightly syringing every day will materially help in this. Bring the plants to a sunny position as soon as possible. With judicious watering and treatment, little foliage will be lost, and the buds will swell and develop. As they do so assist them with some weak manure water, and stand the plants in cool, airy house.

Precisely similar treatment should be accorded to *Salvias*. *Salvia splendens* is usually in bloom when so lifted and potted. As soon as the plants show signs of having taken root hold transfer under glass and see that they do not suffer from lack of water at the root. A position under glass, where a little heat and plenty of light is available, will ensure these plants remaining attractive for a considerable time. By affording a stove temperature after the first blooming is past more growth and flowers will follow.

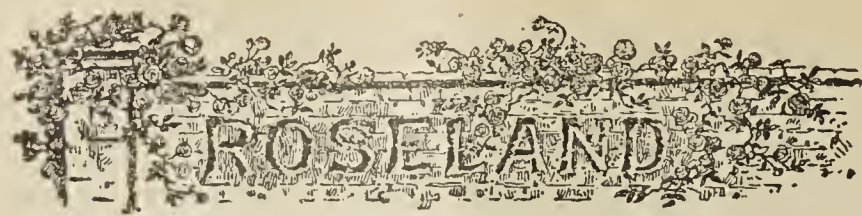
**Cypripedium × Constance.**

Richardias planted out in summer die down eventually, but spring up with fresh growth from the crowns, and produce vigorous stems and large leaves. Some of the strongest will throw up spathes while still in the open ground, but those which do not, the lifting and potting serve to check them, and induce them to do so later.

After potting, place the pots on a hard base, in this case in the full sun, and give a copious soaking of water. Let them remain out until the approach of frost, but house them in time, as they are very susceptible to light frosts, and are much injured if caught.

Eupatoriums, *Solanums*, *Bouvardias*, and *Heliotropes* may be lifted without preliminary treatment in the matter of cutting the roots. They are usually well furnished with fibrous roots, as many as possible of which should be retained, and long, bare roots shortened back, placing all in as small pots as can consistently be done. Give cool frame treatment at first, and eventually house treatment.

Lobelias really come under the category of bedding plants, many of which are lifted and potted to provide stock. *Lobelias* should be cut down: that is, the flowering stems ought to be removed, and when short, young growths have been produced the clumps may be lifted and potted, wintering on a shelf in greenhouse.—E. D. S.



American Roses.

That America keeps forging ahead of us in a good many matters it would be useless to deny; and it must be a question of interest to rosarians to know what varieties are most popular and most largely grown in the United States. We are accustomed to think that these are naturally different from our favourites, because of the severity of the winter, which prevents any but the hardiest being grown entirely out of doors, but in some of the western States the climate approximates more nearly to our own, and all varieties except, perhaps, the tenderest of the Teas, are grown to perfection there.

I have lately received a pamphlet, and also a gardening paper from America, and the advertisements of Rose plants in the latter have much interested me. About eight or ten varieties only are mentioned in thirty or forty advertisements, and I am not sure that an English gardener would recognise "Beauties, Brides, Gates, Maids, Ivory, Perles, Meteors, and Woottons," but our friends across the water have a most praiseworthy way (to my mind) of cutting down long titles, and I shall be glad to see them operate on the names of some of our newest Roses, especially those "made in Germany."

The advertisements, no doubt, relate almost, if not entirely, to "stuff" for growing under glass, and it is noticeable that a full half are varieties originally raised in America. "Beauty" is American Beauty, very highly esteemed, and grown, perhaps, in larger quantities than any other Rose. The variety was known here as *Mad. Ferdinand Jamain*: I forget the raiser and the date, but I think it has been practically dead to English catalogues for ten years at least. Somebody, I believe, tried to re-introduce it as American Beauty, but it failed to find any appreciation. One secret of its popularity in America lies in the possibility of cutting the blooms with quite long stems; and here I do not hesitate to say we are behind-hand.

I have often urged on my friends in the trade who sell cut blooms in quantity in our cities that, without giving up their present manner of cutting, they might add to it another grade of "long-stemmed" Roses, of a foot to eighteen inches, at a higher price. I have the firmest belief that, when once ladies, town florists, &c., have tried these and found their great superiority for decoration, there will be a large demand for them at a remunerative price. The answer I generally get is that Americans can cut with long stems, because they cut away and do away with the whole plants, raised in great quantities in small pots under glass, while English nurserymen, cutting from maiden plants in the open, would check their plants and render them less valuable for sale. I still think it might be done with Ulrich Brunner and other strong-growing varieties, either by cutting not more than one or two blooms with long stems from each plant, or growing a certain breadth on purpose, for I believe the price obtained might be nearly, if not quite, doubled.

And I really believe the other secret of the popularity of American Beauty lies simply in the name, the title of which seems at least doubtful. Our excellent cousins across the water take it for granted, perhaps, that they do so in *all*, and that there can be no crimson Rose to compare with American Beauty. But, in a pamphlet I have received from an amateur grower in a western State, the acknowledgment is made that long stems have not succeeded in making American Beauty beautiful, but merely fashionable. He has the courage of his opinions, and declares that American Beauties are born with that tired look that Ulrich Brunner does not show till after three or four days' exposure to a hot sun.

"Brides" are, of course, "The Bride," a sport of Catherine Mermet originating in the States; and "Maids," are Bridesmaids, another American sport of the same Rose. "Gates" are Golden Gates, a Tea Rose raised in the States; and "Ivory," a light sport of the same. "Perles," *Perles des Jardins*, of good colour under glass; "Woottons," *Souvenir de Wootton*, a good crimson Rose for early forcing. Of "Meteor" I remember the name, but nothing more.

The Rose plants in these advertisements seem very cheap—about 10s. a hundred seems a common price; but then, I take it, they are not meant as lasting plants, and are thrown away as soon as the blooms with long stems have been cut from them.

Reverting to the name American Beauty, I do not think the Americans have much scruple about changing names. I see that Gruss an Teplitz has been re-named Virginia R. Coxe, and we know that the change has not always been for the better, as to simplicity and ease in spelling, as was seen in the re-christening of Mrs. W. J. Grant as Belle Siebrecht.

My correspondent in the West sent me a photograph of "Fortune's Double Yellow" growing on his house, a literal mass of

bloom, which puzzled me a bit. I know Fortune's Yellow, and a beautiful Rose it is, and a free bloomer very early on a south sheltered wall; but I never heard the term "double" applied to it, and the photo did not seem quite to correspond to our Fortune's Yellow. Still, I think, in spite of the following quotations—"Fortune's Double, white and yellow, literally cover porch and wall," and "The Banksia climber, Fortune's Double Yellow, is known in California as the 'San Rafael Rose'"—(which sound as if referring to the yellow Banksia) that our Fortune's Yellow is meant, after all. Does anyone know?—W. R. RAILLEM.

Rose, Gruss an Teplitz.

In my notes on Roses in the Journal a short time since I spoke favourably of this Rose. Since then I have had a further opportunity of appreciating its great value. In Lord Battersea's charming garden near Cromer is the finest exposition of this Rose that I have come across. At the front of a shrubbery margined by the lawn, and with a southerly exposure and facing the mansion, a group of not less than two dozen plants of this Rose were planted last autumn. In the sandy soil here this Rose has made growths this season fully 6ft high and clothed with such foliage as I have not seen before on any Rose—that dense, deep green with a leathery look so pleasant to look upon.

As might be expected, each sucker-like shoot is surmounted with a cluster of a dozen or more of those velvety red-hued blossoms which are so remarkable in this Rose, and of that size and lustre so enchanting in this Rose. Mildew on this Rose was conspicuous by its entire absence, although this variety is addicted to this pest considerably, in the southern counties especially. Hard pruning was practised. The growths were cut back to within a single eye, which no doubt accounted for so much vigour. In the distance this group gave one the impression of finely flowered and brilliantly coloured Cactus Dahlias.—E. M.

Irish Prospects.

As the brightness and bustle pertaining to the International motor race and Royal visit abate, economic factors ruling an agricultural country force themselves to the front, and the outlook, to say the least, is not cheerful. It cannot, indeed, be regarded as other than serious, and although the shortcomings of the season are not yet fully revealed, a sickening odour of rotting Potatoes and musty hay, with the miserable appearance of the corn crops are present effects of a rapidly passing year, affording but poor promise for the near future when the full tale of its misdeeds is told. Even those most concerned do not at present seem to fully realise what it must mean to them in particular and the country in general. True, there has been much, and is something still, to distract attention which at present seems more centred on the American cup than on those desultory Press reports of the crops which take but a second place in the papers. However, sufficient for the day . . .

Gardening, perforce, should rank first in these notes, and of other things hereafter. Fruit bearers are, practically, barren, with, of course, local exceptions. This in allusion to the staple kinds, viz., Apples and Pears. Possibly the same ruled, generally, with small fruits, for Strawberries appeared to be but wretchedly represented in Dublin during the season, and bruised berries waited in the shop windows for buyers at 1s. per pound. Personal experience can only report that never was there a stronger promise nor a weaker performance, the finer fruits rotting on the ground ere colouring; but with Gooseberries the bushes were simply weighted down, and made a record so far as the same personal experience is concerned. As for Plums, non est sums up their achievement, and virtually includes all else in the fruit department.

Vagaries in vegetable culture are more plentiful than usually falls to the lot of those who cater for the kitchen. It is pleasanter to look back than it is to look forward, for Peas, which play so prominent a part in the menu, were highly satisfactory. French Beans, after many days, at last came into bearing, although but lately they appeared likely to land us in the same fix that gardeners in some part of Scotland experience, viz., a "wee taste of frost" to settle them ere any other tasting obtained, but the succulent Marrow, not much appreciated in Ireland, is well in evidence. Apropos of that and cottage gardening in the Green Isle, which yet, unfortunately, is all but conspicuous by its absence, there is, undoubtedly, a prejudice among the peasantry against the Vegetable Marrow, which, too, permeates the servants' hall in higher places, the Celtie Jeames de la Pluche pinning his faith to "white Cabbage" as his sole vegetable all the year round; Potatoes here being no more regarded as a vegetable than is bread, which has been already duly recorded in these pages by observant visitors to Erin. Nevertheless, notes from the garden must include the "noble tuber."

A breadth of Sharpe's Victor, which gave a splendid crop when turned out early in August, showed but small trace of disease. These were stored in hampers holding about 2cwt each, and placed in a dark, dry, well-ventilated shed for present use. We felt rather happy about them, for here was something to hand whatever might happen to later lots. Alas! for the sequel. Fully 50 per cent. went bad in the hampers. As for later lots, still in the ground, with reputed disease resisting sorts amongst them, judging by the burnt up haulm, sound tubers are not in it, in spite of heavy sprayings of orthodox mixtures. "Dig 'em, of course, at once." Exactly so. We are just waiting for a dry day to do it, and in saying that all is said that need be said about the present state of Irish weather.

Looking ahead through a literal Scotch mist, which, in its continuity, ought to have suited those crops intended for winter and spring supplies, the fact is apparent that it has not done so. Celery, Broccoli, and others of that ilk, are making but miserable growth; but, and it is worth noting, for the first time in six years the periodical plague of flies came not, and Onions and Turnips have escaped their kindly attentions. Wasps, too, until but recently, were missing. When they did come they meant business by promptly attacking the Grapes—Black Hamburgs—which were as promptly bagged in stiff muslin. The tough-hided Colmans and Alicantes being untoothsome to the Vespa family escape. Bags are a necessary nuisance, undoubtedly; one never knows what is going on inside, and with Hamburgs fully ripe a bad berry makes heaps of mischief, so when the bag is opened hard words are apt to come out.

Less perversity and more comfort, perhaps, is derived from thoughts among the flowers. Never were Sweet Peas finer or more persistent in blooming, being still as big and bright as ever, though somewhat skimpier of stem. They were planted in heavily manured trenches, being previously raised under glass, in pots, a few seeds in each pot, and then transferred to the trenches, each potful placed a foot apart. Sixteen of the brightest selfs were selected from the seed list, and it is just a question now whether six kinds will not be sufficient for next year, as the best reds, whites, and blues are most appreciated for cutting. Red, white, and blue were our company colours during the King's visit to Dublin, and patriotic fingers picked out the brightest for loyal effect, which, with natural grasses and a few light sprays of Asparagus (they just escaped being "gypsophilised"), left nothing to be desired. Six kinds only for the seed list next season! Unless weakness yields to temptation: Two blues, two bright reds, two clear whites. For the first couple, Lady Grizel Hamilton and Captain of the Blues; reds, Prince of Wales and Salopian; whites, Emily Henderson and—and, probably, Emily Henderson again, these varieties for vigour and all round goodness standing out pre-eminent, here at least. Opinions may differ, but allowance must be made for local circumstances, which alter cases.

Mildew is rife among the Roses, and autumn blooms are nothing to brag about. One H.P., however, grown in quantity, stands out far and away above the fellows of its tribe in its clean, broad, glossy foliage and perfect autumnal blooms, which rival in quality, and almost in quantity, its summer display. Dare one mention its name, having praised it so often before? It is, of course, Ulrich Brunner, still sending up growths like walking sticks after being planted six years. La France is equally as good in its own way, and more floriferous. So with the charming species, *hermosa*; but, alas! for the refined and elegant Mrs. W. J. Grant, which is fast dying out.

So one might go on, speaking of joys and disappointments, the balance, probably in favour of the former so far as the flowers are concerned, for, somehow, we unconsciously turn to them for comfort, and perhaps it was never more needed, or more easily found than now amongst the bright autumn bravery of Tritomas, Cactus, and single Dahlias, with the insinuating blue of *Erigeron speciosum*; the mingling odours wafted from modest *Mignonette*, luscious *Heliotrope*, and all the odds and ends of beauty and interest which go to make our kitchen garden a thing of beauty. The flower garden proper, with its bedding, is simply "not in it."

However, it has its own peculiar right of being, and has to be, on our terraced front; and it must be noted, too, that the bedders, except Begonias, have behaved badly. Geraniums, dying out in patches under the affliction of "black spot." One feels better, however, on hearing from the Gunnersbury boys (again home for a holiday), "it's the same around London, only worse."

"Back to the land"—momentarily; and to the seamy side of soil production in Ireland—

"Are Italy's fields more green,
Do they team with a richer store,
Than the bright green breast of this Isle of the West,
And its wild luxuriant shore?"

No, emphatically no, so far as greenness is concerned, for there is a plethora of grass and uninterrupted growth on the great grazing grounds of Dublin, Kildare, and Meath. Beyond that there is but little to add to what has been said of the disastrous condition of the corn and Potato crop, except that as regards the

latter spraying with antiblights has been, practically, valueless this year owing to the continuous washing off by rain.

Possibly there is a lesson in this pointing to the necessity of some adhesive being employed with the ordinary solutions of copper and lime. Spraying is not an easy task, and it is not only a question of whether our easy-going people after the second application—they seldom reach that, it is feared—would persist any further with the preventive, but whether anybody else would, and if they did, the ultimate result of introducing an appreciable quantity of such highly poisonous matter to the soil. A recent run by rail to Skerries, on the north-east coast of our country, revealed much that was pitiful to see in the breadths of Oats and



Vitis Thomsoni, $\frac{1}{8}$ -size of nature.

Barley flattened to the ground, and unless this month of September goes on better than it began, it will take a lot more motor-ing, Royal visiting, and Liptonian yacht racing to cheer up Ireland in the opinion of—K., Dublin.

Vitis Thomsoni.

This new species, which we figure on this page, is one of those sent home from Central China by Messrs. J. Veitch and Sons' collector (who is out there now), and, along with five others, received certificates when staged in the James Street Drill Hall before the Royal Horticultural Society, on September 1st. It received a First Class Certificate. We have already described the plant (see page 247), and the reduced drawing will further serve to elucidate the subject. The leaves are reddish above, and violet purple beneath. The stalks are about five inches long. As it climbs, and clings by its own tendrils, the newcomer is a valuable (hardy) acquisition.

NOTES

NOTICES

Wasp and Bee Stings.

The sting of either a wasp or a bee is instantly cured by touching the spot affected with tincture of iodine. Fond mothers are occasionally in the habit of applying the "blue-bag," in which of course iodine forms an element. Dry earth has also been recommended.

National Dahlia Society.

By permission of the Royal Horticultural Society an inspection by our committee of the Cactus Dahlias grown for trial at Chiswick will be held at Chiswick Gardens on September 17, at 2 p.m. A prize of 10s. 6d., the gift of Mr. A. Dean, will be awarded to the raiser of the best variety for garden decoration.—P. W. TULLOCH, Hon. Secretary.

Colours of Cactus Dahlias.

Dahlias are now at their very best. The Cactus varieties have all sprung from the Mexican species (*D. Juarezi*), introduced to this country in 1878. It appears inconceivable that a crimson flower should, in the hands of the florists, have come to develop a large range of colours, ranging from pure white to almost black, and also combinations of colours. Some are weird, some fascinating, some approach the grotesque; but all are attractive in their way.

Royal Caledonian Horticultural Society.

At a meeting of the council of this society, held on Saturday, 12th inst., it was unanimously resolved to at once set about preparations for the holding of an International Fruit and Flower Show in Edinburgh under the auspices of this society in September, 1905. The last international show held by this society was in 1891, and proved a great success. Looking to the strides which horticulture has taken in recent years, both at home and abroad, the council anticipate a greater success, and they are desirous to offer premiums even better than in 1891, the total sum then offered being £1,300. The secretary is P. Murray Thomson, S.S.C., 5, York Place, Edinburgh.

National Chrysanthemum Society.

The first meeting of the Floral Committee of the above society will be held on Monday, the 21st inst., at 3 p.m. in Essex Hall, Essex Street, Strand. This is the first of three meetings arranged to be held in Essex Hall, the succeeding two being on October 26 and November 23, both at 3 p.m. The remainder of the meetings of the Floral Committee will take place at the Crystal Palace on the dates fixed for the three usual exhibitions, viz., October 6, November 10, and December 8. On these three occasions the meetings will take place at 1 p.m. The first meeting of the executive committee of the society will be held at 7 p.m. on the 21st inst., at the old business quarters of the society, Carr's Restaurant, 265, Strand.

Essay Prize of £10.

The President and Council of the Royal Horticultural Society offer a prize of £10 for the best essay on "Cottage and Allotment Gardening." The essay must not exceed 5,000 words, and all unnecessary technical expressions should be avoided. Notice must be taken of vegetable, fruit, and flower cultivation. The essay must have as an appendix (not included in the 5,000 words) a list of reliable but inexpensive books on the subject which could be recommended to a cottager. The prize essay is to become the sole and absolute property of the Society. The essays must reach the Secretary of the Society, 117, Victoria Street, Westminster, S.W., before January 1, 1904. Each essay must be signed with a motto, and a sealed envelope must be enclosed, bearing the same motto on the outside and the writer's name and address inside. These envelopes will not be opened until the judges shall have decided on the motto winning the prize. If any illustrations are added they should be of the simplest and plainest outline description.—W. WILKS, Secretary, September 10, 1903.

Mr. T. Humphreys.

On a recent date, Mr. T. Humphreys, assistant superintendent of the R.H.S. Gardens at Chiswick, was presented by the students and his fellow workers there, with a gold watch chain, as a token of their esteem, and in proof of their good wishes for his success as curator of the Birmingham Botanic Gardens, which post he shortly assumes.

Sheffield Chrysanthemum Society.

The monthly general meeting of this society was held on Wednesday evening at the Westminster Hotel. Mr. J. G. Newsham was in the chair. Reference was made to the death of the late secretary, Mr. W. Housley, and a number of letters read from kindred societies and friends expressing their sorrow. A vote of sympathy and condolence with the widow and family was passed by the members present. Mr. H. Willford, 96, Greenhow Street, was elected secretary provisionally for the remainder of the year.

United Horticultural Benefit and Provident Society.

The monthly committee meeting of this society was held at the Caledonian Hotel, Adelphi Terrace, Strand, on Monday evening last. Mr. Charles H. Curtis was in the chair. Four new members were elected, and four members were reported on the sick fund. The annual dinner will be held at the Holborn Restaurant, on Tuesday, October 27th next, at 6.30 p.m. Peter Barr, Esq., V.M.H., has kindly consented to preside on this occasion. The committee hope that all members and friends who can possibly attend will endeavour to do so.

Presentation to Mr. J. Doe.

At the conclusion of the King's visit to Lord and Lady Savile, Rufford Abbey, Notts, His Majesty presented Mr. J. Doe, the head gardener, with a valuable diamond scarf pin, in the shape of the Royal monogram. At the same time His Majesty expressed to Mr. Doe the extreme pleasure he had derived from the gardens during his visit, and congratulated him on their condition. Mr. Doe has had charge of the Rufford Gardens for upwards of nine years, and has effected several improvements, and it must be very gratifying to be the recipient of so great an honour.

Tritoma uvaria.

Tritoma uvaria, alias *Kniphofia aloides* (see page 263), Torch Lily, otherwise Red-hot Poker, is happily not a stranger. Beds of the Tritomas (to use the garden name) at this season furnish one of the finest features in ornamental gardening. They do well to eke out a thin bed of *Gladioli*, or even if the *Gladioli* are robust and plentiful, the Torch Lilies do not "clash," but are, in any case, a grand addition. But the very best combination the flower gardener can employ is Tritomas and *Galtonia* (or *Hyacinthus*) candidans—a priceless gem when properly associated. If you have not set aside a bed of these plants, please do so: you will admit the handsome effect and the excellent contrast. (In passing, one may allude to another fine contrast in "bedding," and that is: *Anemone japonica*, over bright blue *Violas*). The Torch Lilies like generous treatment, a deep, moist loam, and sometimes require a dressing or protection of half-decayed leaves over the crowns in winter. Do not cut away their own foliage: this assists the crown.

The Gale at Cardiff.

The gale on Thursday last played havoc with the Chrysanthemums in several gardens in this district. In one garden, that of Mr. Geo. W. Drake, the well-known grower, dozens of plants were laid low and snapped off, whilst innumerable plants were quite stripped of their leaves, just as if a knife had been drawn over them. At one time during the late evening the force of the gale was so strong that the pots were actually blown off the boards on which they stood, and Mr. Drake was obliged to cut the ties of every one and place the pots flat on the ground. The damage and loss to this grower is very considerable. His plants, which numbered about 600 (*Japs* and *Incurveds*) looked remarkably well before the storm, and it is questionable whether they will recover to be of any use. On the whole, the plants in the neighbourhood, where they escaped the gale, are doing well, and the number of growers, especially cottagers, this year is more than doubled, and keen competition is expected at the November show.—G.

Old Time Gardening.

(Continued from p. 94.)

Bacon's princely garden and Lawson's country garden would in conjunction afford us a very incomplete notion of the condition of gardening had not John Parkinson supplied in his incomparable "Garden of Pleasant Flowers" details of the rich material with which our old-time country gentlewomen had it within their powers to furnish and embellish their gardens. Nothing whatever novel in the arrangement of a garden occurs. Knots, mazes, mounts and all the rest continue as formerly, but the number of flowers, principally "outlandish" flowers, are enormously increased, and in fact, for all the purposes of garden decoration, allowing somewhat for what a florist would consider a weakness in quality, it is clear that a garden in the beginning of the seventeenth century could have been furnished with as varied a selection of beautiful flowers as it would have been possible to supply during the next two hundred years. Even to-day we may well doubt whether numbers of gardens possess treasures of floral beauty equal to the "Garden of Pleasure."

The author, indeed, declares it possible to have a garden gay with flowers in nearly every month. "Whosoever—may have for every moneth severall colours and varieties even from Christmas untill Midsommer or after, and then, after some little respite, untill Christmas againe, and that in some plenty, with great content and without forcing, so that every man may have them in every place." He mentions about a hundred Daffodils, ten Fritillarias, fifty "Iacincths," "some like unto little bells or starres, other like unto little bottles or pearles, both white and blew, sky-coloured and blush, and some starlike of manv pretty various formes."

Then of Crocus there were twenty sorts, Lilies as many, Tulips beyond reckoning, and Anemones the same. Carnations of every colour in great variety, with Auriculas, Pinks, Holikocks, Hepaticas in ten sorts, and a great variety of other flowers. A lengthy chapter on the Carnation establishes the fame of this the queen of hardy flowers, and shows

the extraordinary hold it must have already gained as a high-class garden flower.

The cultivation of the Tulip, too, is recorded at much length and with not a little clearness in the details, and with regard to the treatment of Daffodils it would be quite safe to follow bluff John as a guide. He shows that this bulbous plant and, perhaps, some others, may be kept out of the ground without harm till the end of the year, and that they bear transplanting at the flowering stage with impunity, the latter a wrinkle that every present day gardener has not appropriated.

Names are, of course, a difficulty. Though there were plenty of Snowdrops, we must look for them among bulbous Violets! and though he pictures and treats on the Tuberose, it is by name of the Indian knobbed Jacinth. *Tradescantia virginica* is described as the soon-fading Spiderwort of Virginia, and is included in a chapter devoted to St. Bruno's and St. Bernard's

Lilies, which the author thought possessed affinities in common with the *Tradescantia*. A very extensive collection of Irises is named, and described under a variety of sectional names. Even a few Orchids were admitted into this garden. *Orchis latifolia*, *O. maculata*, *Habenaria bifolia*, *Ophrys apifera*, and *O. Myodes*.

Among Auriculas we have to look for *Ramondia pyrenaica*, which was distinguished by its Borage leaves from other sorts. It is curious to come upon this and other plants we now know under different designations; another of which may be mentioned is *Kochia scoparia*, here called "Scoparia or Belvidere Italorum Broome Tod Flaxe." *Thalictrum aquilegifolium* figures as Spanish Tufts or Tufted Columbines, and *Adonis vernalis* is "The Great Oxe-eye or the yellow Anemone." Tomatoes were cultivated along with Medicagos (called "Snails") as curiosities in the flower garden.

Not the least interesting phase of gardening was the hold that shrubs, evergreen and flowering, had gained in English gardens; Lilacs, various Clematis, *Laurustinus*, varieties of Cherry with double flowers, *Solanum capsicastrum*, *Rhus typhina*, Virginian Creeper, *Cratægus pyracantha*, and our now common Laurel, as well as Portugal Laurel, being a selection.

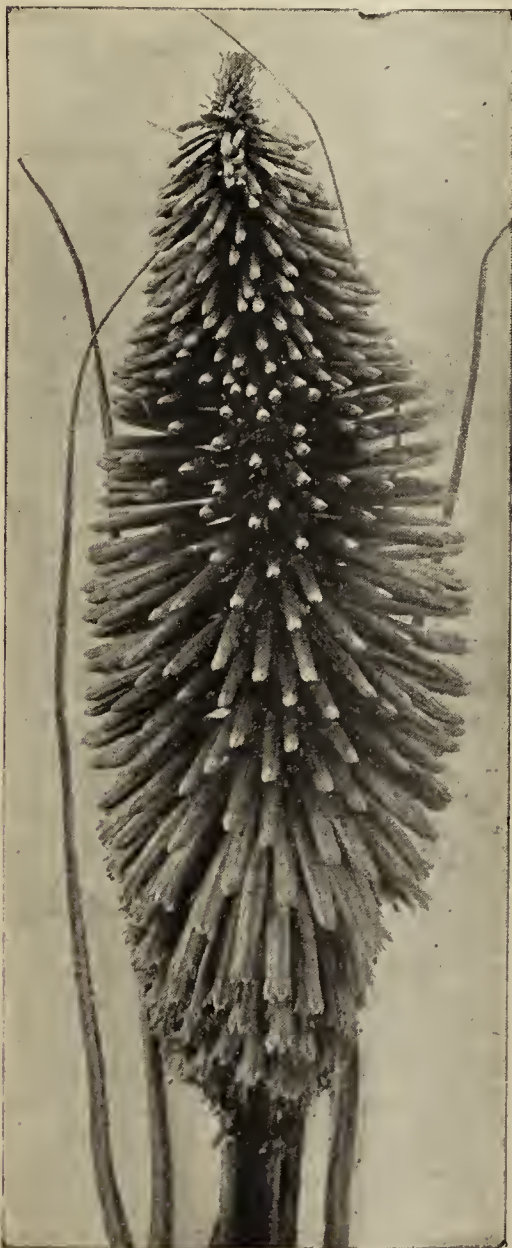
A few of the better class herbs, especially those with variegated foliage, were cultivated among flowers. Among these we discover the tricolor Sage, which at present is very rare, but not by any means an undesirable plant. Basil, "Lemon" and variegated Thyme and Sweet Marjoram also were highly esteemed: of the latter it is remarked "The Sweet Marieromes are much used to please the outward senses in nosegays and in the windows of houses." In this we have surely lost something. Then he mentions "yellow or golden Hyssope—so pleasant in colour, especially in summer, that they provoke many gentlewomen to weare them in their heads and on their armes with as much delight as many fine flowers can give." Adorning arms with vegetation seems to have been very common at this period, among other material used being the green Strawberry, specimens of which I saw exhibited perhaps twenty years ago in Edinburgh. How easy to satisfy with flowers were the grand dames of London is further proved by Parkinson's description of a nosegay.

In describing *Tropæolum indicum*, he remarks: "The whole flower hath a fine small sent, very pleasing, which being placed in the middle of some Carnations or Gilloflowers, make a delicate Tussimussie, as they call it, or nosegay, both for sight and sent." Could anything be simpler in material or more charming in the effects proposed?

Before leaving this enticing part of the subject I must mention the custom related by our author of gentlewomen (obviously confined to bed by illness) decorating their beds with a *Calamagrostis* "tyed in tufts, to set them instead of feathers about their beds—when as they have been much admired of the Ladies and Gentles that have come to visit them."

Like all his predecessors, Parkinson found it impossible to conclude his book without having something to say of vegetables and of fruit trees, and though less esteemed at the present day, his remarks on these are equally valuable with those on flowers. For example, he informs us that Muske Melons had lately come into cultivation, but we gather that more had failed than those that had succeeded in bringing fruit to perfection. The best seed is said to be Spanish. When it is noted that bell-glasses were the best covering available, it is not wonderful that success should have been problematical. As to the quality of the fruit when ripe, we are left to conjecture, but it was eaten with pepper and salt and drowned in wine! Cauliflowers were very uncommon, and the plants were raised on hotbeds, and seem to have been very late, as frost is said to destroy the plants before heads were formed. Tobacco was now and for long after cultivated as a garden herb, and it is incidentally mentioned that Liquorice was planted by the acre. It is curious to read to-day that Bloodwort (*Rumex sanguineum*) was one of the principal vegetables cultivated in a garden, being in constant use in cookery. Cabbages, as still practised by cottagers in Scotland, were set along the outer portions of other vegetables.

In this compendium it is interesting to fall upon the earliest mention of Celery. It is here called Sweet Parsley or Sweet Smallage. It appears to have been introduced from Venice, the Venetian Ambassador having been the first known to have cultivated the plant in his garden "neare



Tritoma uvaria. (See page 262.)

Bishopsgate streete." Three kinds of Potatoes are described, viz., Spanish or Convolvulus Batatas—the Potato of Shakespeare; Virginia Potatoes—the sort of the present day, which were not much in use; and Potatoes of Canada or Jerusalem Artichokes," so common that even the most vulgar begin to despise them."

Of Peas there is nothing new to be said, only that the earliest were produced at Fulham. It is not a little curious to find *Physalis Alkekengi* figuring as a vegetable, and also the Strawberry, the constant use of the foliage no doubt being the reason in its case.

Parkinson's Orchard is superior in many respects to that of Lawson, though it is perhaps hardly worth while to indicate too closely the respects in which that is so. The method of managing wall trees at this period are, however, so interesting that a few words must be permitted on this, and let it be remembered that the writer is detailing not so much his own practice as the best methods employed by gardeners of his acquaintance.

"Divers," he remarks, "by carefully nipping away the waste and superfluous buds, doe keepe their trees in conformity, without much cutting." It was the practice of some others to anticipate the usual winter pruning and training by overhauling their trees after the fruit was gathered. Then, can anyone to-day improve on the local treatment of canker? "Most men," he says, "doe wholly cut away as much as is fretted with the canker, and then dresse it—with vinegar and cow's dung." The last-named mixed with urine is recommended as a wash to apply to the stems of Apples and Pears to protect from rabbits and hares. I have used the same with the addition of a little clay with every success. Concerning Vines, he considered it fruitless labour to attempt planting vineyards, but he commends the practice of raising Grapes on walls, and cautions against allowing the Vines to bear too many bunches.

No fewer than twenty-four kinds of Grapes are described; some of these are still familiar. Of the White Muscadine, he relates bunches had been produced that weighed 6lb, and berries half an ounce each. The Frontignac and Alligant will also be recognised. A very large number of Cherries are mentioned, and also of Plums; while the list of Peaches is remarkable, Newington being a variety still familiar. Of Nectarines seven sorts are described, and were held in higher esteem than were Peaches.

Apples were numerous, and among these are such familiar names as Golden Pippin, Flower of Kent, Densan, Leathercoat, and Cat's-head. Even more interesting is the chapter on Pears, as indicating the great variety of that pleasant fruit in general cultivation, and not a few of these by their names undoubtedly English, as, for instance, the Windsor. "Peare Gorgonell is an early Peare, somewhat long, and of a very pleasant taste."

How exceedingly plentiful was this fruit may be gathered from the remark: "They are eaten familiarly of all sorts of people, of some for delight, and of others for nourishment, being baked, stewed, or scalded." In the chapter on "Oranges," in which it is stated that Citrons and Lemons will not live in England, some interesting notes occur on the method of wintering the plants, and what may be called an early form of plant-house described. They were placed in the open in summer, but had to be protected in winter, as he says in some instances, when planted in "great square boxes" by being removed under cover, "others plant them against a bricke wall in the ground, and defend them by a shed of boardes, covered over with a seare-cloth in the winter, and by the warmth of a stove or other such thing give them some comfort in the colder times; but no tent or mean provision will preserve them." The whole of the treatise of fruits, indeed, bears out what the author affirms in the Epistle to the Reader, that the country at this time was better stored and furnished with fruit than "ever in any age before."

The book is well known to have been published in 1629, but Parkinson states that it was long before this intended to be published, so that it may well be accepted as picturing the best things in cultivation at the period under review—the earlier years of the seventeenth century.

A few items of interest from a contemporary writer, who, among other subjects, treated gardening from a commercial point of view, may be of interest as rounding off the question in all its phases. Ground for market gardening near London was let as high at this period as £6 an acre, and among the crops mentioned as being cultivated

in large breadths are Roses, Cloves, Gilliflowers, Liquorice, and Lavender. Turnips and Kidney Beans were also grown by the acre, and Strawberries seem also to have been extensively cultivated, a method of producing large fruits by the application of manure water showing that the business was carried out on other than haphazard lines.

It seems hardly credible that many crops produced £50 and £60 an acre, and it is plain that a market gardener 300 years ago enjoyed a more rosy existence than his present day representative. He was, however, a notoriously exclusive individual, and in order to guard against the repeated introduction of a new species—the private gardener—into his ranks, he secured from James I. a monopoly of the trade, and we find him quite a century later putting the power placed in his hand, if not to oust from the ranks, at least to persecute to the utmost, a gardener—Switzer—who attempted to establish himself among them.—B.

The Potato Disease.

A PUZZLE FOR SCIENTISTS.

We are a puzzle-solving race—or at least we ought to be—judging by the wave of solve-me-if-you-can competition which is passing over the land. Millions of the British race must each week be deeply engrossed in attempting to unravel the posers set them in periodicals, which vie with each other in the attempt to catch, and hold, the public eye. Some good is undoubtedly done by such means, as it shows a way in which all may spend a pleasant hour, and leads others to become thinkers and investigators. Beyond that, however, when the puzzles have been chiefly solved, the world in general is none the better, and there is no advancement to be recorded on the credit side of human knowledge. How different things might be if the tremendous amount of mental energy exerted in solving problems, already known to a few, could be directed toward the serious ones which confront us in various walks of life.

In matters connected with gardening there is certainly no lack of problems awaiting satisfactory solution, and if the thoughts and observant powers of all interested in "Adam's art" can in the future be more closely concentrated upon such problems, progress will inevitably follow.

Among crops generally grown the Potato will supply enough curious examples of erratic behaviour to engage the attention of a few thousands, and there are many puzzles connected with the disease which have not yet been satisfactorily solved, although great advances have been made during the last twenty years. In this matter we are greatly indebted to scientists, who have taught us much concerning the dreaded disease, *Phytophthora infestans*, and have provided a valuable remedy which is unfortunately too little used.

Recent observations have, however, convinced me that there is a "missing link," if not several "missing links," as to the various methods by which the disease is spread. The usual course by which it is transmitted to the tubers is through the medium of leaves and stems. The active spores, having settled on the leaves, spread their mycelium through the tissues of such leaves, and downward through the stems to the tubers. It must, therefore, necessarily follow that the disease should first attack the tuber at the point where it is connected with the stem by means of the thread-like off-shoots. This is so in many instances, but by no means in all, and hence arises the question as to whether a tuber may not contract disease from active spores in the soil without any connection with top ground?

I am led to ask this question in consequence of a puzzle which was brought to my notice a few days ago when visiting some noted Potato growers. I then saw a splendid crop—such as would delight the eye of an exhibitor—being lifted, and disease was already apparent in some of the finest tubers. The growers selected a beautiful shapely example six or eight inches in length, and drew my attention to the fact that it was only diseased on the end opposite to that by which it was connected with the stem: on no other part of the skin could the slightest trace of disease be found. The Potato was then cut into equal parts, from end to end, when it was clearly seen that the disease had only penetrated the outer skin: not a trace could be seen in the starchy matter, and none near the thread-like stem growth which connected the tuber with the main stem. No other tubers were growing near enough to touch this particular one, and as it had clearly not contracted disease from the stem, from whence did the disease come?

The only conclusion I can advance is that the active spores which fell from the leaves on the soil, were able to penetrate the soil, and to find as suitable a medium for germination and growth on the tuber as on the leaf. This is a point of interest to all, and if any of the able scientists connected with the Royal Horticultural Society can throw light on the matter a puzzle having great practical value will be solved.—R. H. S.



"Botanical Names for English Readers."

The undersigned present the following query:—"Can you tell us if 'Botanical Names for English Readers,' by Alcock, is written in dictionary form? Also if anyone can supply us with a copy? It is an oldish book, and we cannot locate one at the moment."—MORGAN AND Co., 8, St. Mary-at-Hill, London, E.C.

Wash for Gooseberry Buds.

If "Fruit Grower" will try two bushels of fresh lime, with warm water, in a large tub, and when hot add 10lb of Russian tallow, stirring until "drawn" and thoroughly melted, he can then strain it through a home-made sieve of fine-meshed zinc, nailed on to a square box 2in deep. When this is done, add two bushels of soot, through the same sieve. Thoroughly work these all together, and then strain it all through again, into a forty gallon barrel. While still warm, we apply this wash to Gooseberries, Currants, Plums, and any mossy trees by syringing. Use a nozzle syringe, not the ordinary spray. One must have a fine morning, for if caught by rain before the wash dries it will wash off, but if once dry it will keep on through a season. The tallow is important, and must be sufficient to keep off rains. Very rainy seasons may want a second doing. We have not had sawfly since using this simple remedy.—HENRY GALTON, Shawford House Gardens, near Winchester.

Our experience for the last ten years has proved that the only perfect protection is to thread the branches, using "Royles' Threader," as supplied by any seedsman. The buds are absolutely untouched. It is only a question of one or two minutes to each tree, and should be done before severe weather commences, say, about the middle of November. Once each year is sufficient, and the cost is infinitesimal, the result being always certain.—THOS. FLETCHER.

Red Spider.

Who has not had his share of combating with the insidious attacks of this little "animal"? For it is not an insect, scientifically speaking. Few establishments are unacquainted with his presence at some time or other during the year, and more especially if the season is a hot and sunny one. He is, however, not by any means unknown in wet seasons. Where borders are entirely constructed inside, the predisposition to spider is very much greater. On the other hand, outside borders, especially those having a tendency to the damp side, may never be troubled with this pest. Indeed, I know some such borders where the appearance of spider was never known. This corroborates the well-known fact that defective moisture at the roots has a great deal to do with the first appearance of spider. It is pretty well understood that moisture is inimical to the welfare of spider, and as a safe course for preventing its appearance, this is the best known, at present, to gardeners. To be effectual, never allow the roots to get into a state dry enough to give rise to an attack.

This is, perhaps, in many cases, not such a simple matter as one would imagine, especially where the practice obtains of not allowing the operations of the syringe beyond the period of the breaking of the young buds. Many good practitioners maintain that beyond this period, surface moisture tends to unduly enlarge the foliage, and in consequence become in texture ill adapted to support a heavy crop of fruit. This may be so, but we think with necessary attention, a due amount of fresh air, which is always available, any danger arising from this can be rectified. When surface moisture and syringing are not admissible, the liability of defective root moisture becomes proportionately greater. Few can hardly believe the amount of moisture, under such circumstances, that a full-grown, healthy Vine absorbs in a hot day from the soil.

The attack generally takes place before the gardener suspects the presence of spider; indeed, it often happens that the little fellow has got a fair footing before it is detected. Then, of course, a rush is made to half drown the roots and foliage with water, perhaps fumigating and so forth, with only comparative success. The vitality of the spider is phenomenal; cold or heat

apparently does not very much interfere with its progress. Fumigating appears only to partially annoy him, and though sulphured pipes may be a preventive, it is not a cure. For my own part, I believe an occasional dressing of short grass from the mower a very good antidote for spider. I have always kept him at bay with this, and therefore recommend it to others as worthy of a trial.—C.

Query: Vegetable Marrow Jam.

Would "J. C." or any other reader kindly give the recipe for Vegetable Marrow jam mentioned in *Journal of Horticulture* for September 10? That which we have previously tasted was very nasty.—E. C. C. D. [There may be various recipes for making the jam. We would be pleased to hear from readers.—Ed.]

"W. A.," who has a large quantity of Elderberries, would be much obliged for a recipe for making wine from them.

The Croft, Burcote, Oxford.

The many people who go up and down the river Thames all speak in high praise of the beauty and charm of The Croft, a riverside residence near Dorchester, which belongs to S. Randell Higgins, Esq.

This charmingly situated place is now at its best, and I am sure no words or paint could do justice to its sub-tropical and fairyland-like appearance. The flower beds and borders are filled with *Dracænas*, *Fuchsias*, *Humeas*, *Galtonia candicans*, *Cannas*, *Nicotianas*, *Ricinus*, *Silver Thistles*, *Ophiopogon*, *Calceolarias*, *Lobelias*, *Gladioli*, which are well grown and judiciously intermixed so as to give a charming effect. The boat-house and the balcony of the residence are enhanced in beauty and effect by hanging baskets containing an assortment of flowering and foliage plants, also by boxes and pots filled with plants—in all, over 400 plants.

On the lawn, close to the river, are several large tubs filled with the Ivy-leaved *Pelargonium Madame Crousse*, each about five to six feet high and twelve to sixteen feet in circumference. The towering *Coniferae* and the large and well grown forest trees relieve the architectural beauty of the residence.

Fruit crops here are under average, with the exception of Apples, which are a heavy crop. The many houses and frames are well filled with healthy and well-grown plants of *Caladiums*, *Ferns*, *Fuchsias*, *Stephanotis*, *Campanula pyramidalis*, *Crotons*, *Dracænas*, *Tuberous Begonias* (200 plants, some four feet through), *Gloxinias* (1,000 plants, which are going over), *Primulas* (200 plants, very healthy). The 500 pot *Strawberries* of *Royal Sovereign* and *Vicomtesse H. de Thury* look remarkably well.

The *Tomatoes*, *Holmes's Supreme* and *Sutton's Satisfaction*, have, and are, fruiting excellently. The *Melons*, *Hero of Lockinge*, *Best of All*, *Windsor Castle*, *Triumph*, *Sutton's Scarlet* and *Epicure*, are all carrying huge fruits. The *Cucumbers*, *Royal Windsor*, *Improved Telegraph*, and *Market Favourite*, give every satisfaction, and are carrying heavy crops of fine fruits. The work and condition of the place as a whole testifies to the excellent abilities of the very able gardener, Mr. A. Morris, who will shortly be leaving Mr. Higgins' service.—S. HEATON.

Solomon's Seal.

Polygonatum, or *Solomon's Seal*, is a common occupant of the herbaceous border, but very frequently does not receive much attention. It is, however, an excellent subject to grow in pots for early forcing. If strong roots are growing in the garden, lift them in November, and pot in ordinary potting soil in 6in or 8in pots. Treat them in the manner usual with bulbs—that is, plunge under ashes outdoors until growth begins, and then remove to the cool greenhouse, affording a little heat later on to help them to flower. The plants produce long stems, which curve outwards in a charmingly graceful manner, on which are borne long white pendulous flowers, which are very sweet scented. A few plants will fill a greenhouse with delicious perfume. If roots are not procurable in the garden, the bulb nurserymen can easily supply them at a reasonable rate. After doing duty in pots, the roots may be planted out, choosing for them partially shaded borders, where they will prove attractive every spring. A top-dressing of soil and manure applied in March, just when growth is beginning, will prove beneficial.—E. K.

Campanulas for June and July.

No section of summer flowering hardy plants that I know are more useful for brightening up the borders and rockeries than Campanulas, that open their flowers during the months named. Having taken for some time a special interest in this family, I thought a note might be of service to intending planters during the coming autumn.

The following are dwarf growing varieties specially suited for the rockery or edgings to paths, the latter a form of culture which is not only interesting, but useful. *C. G. F. Wilson* produces an immense number of dark violet blue handsome bellflowers, the growth is quite dense and very hardy. *C. Ranieri* is quite the best of dwarf-growing varieties with large flowers. The stock seems to be very low: too many persons sell *G. F. Wilson* for this variety. The difficulty appears to be to get it true to name. In height it grows but three inches, and bears rich blue bellflowers, over an inch across. *C. carpatica* grows nine inches high and flowers freely, and is a good plant, but is eclipsed by *C. C. "Riverslea,"* sent out by Mr. Prichard. This variety grows a trifle stronger than the type, and bears bells quite freely two inches across. This is a gem for any purpose.

C. garganica hirsuta grows four inches high, produces trail-like flower stems, which are densely covered with pale blue flowers, each having a distinct white eye. *C. garganica minor* is even smaller than the type, quite a gem. *C. muralis* (syn. *Portenschlagiana*), 6in., has deeply cut leaves, grows freely, and produces abundantly its dark purple blue flowers, on spikes nine inches long. *C. glomerata dahurica* (one foot) gives its purple blue flowers freely; *C. turbinata*, 4in., deep purple; *C. t. hybrida*, 6in., pale blue; *C. t. pallida*, azure blue, are all three gems for the rockery. *C. punila alba* grows quite freely and flowers abundantly.

C. Hosti alba, 9in., is a charming white flowered variety that should be in every collection. *C. Tommasiana*, 6in., pale blue, drooping flowers. *C. carpatica "Isabel"* (Prichard) is a finer form than *C. "Riverslea,"* and a deeper blue, quite a gem. *C. pulla*, 3in., dark blue.

Those named below are all taller in growth, many suited for a wide rockery, on which they succeed even better than in the open border. *C. Hendersoni*, 2ft., in two years produces a bush fully as much across, and produces quite freely its rich dark blue blossoms on stout stems. No collection should be without this sort. *C. aggregata*, 15in., is azure blue.

C. pyramidalis alba is one of the finest border plants known when properly grown. One plant two years old has at the present time twenty-four fully developed spikes of bloom nearly six feet high, the spikes clothed quite thickly from close to the ground to the summit. *C. versicolor*, 2ft., has a stem similar to *C. pyramidalis*, but the flowers are produced close to the stem. In colour the flower is somewhat difficult to describe. The centre is purple claret, the petals pale blue at their base, deepening to the points. This is a distinct and desirable plant. *C. saltifolia*, 6ft., produces huge spikes, which are completely covered with its purple blue flowers. Every collection should include this plant.

C. micrantha, 5ft., has large leaves, deeply serrated, large, pale purple, bell-like flowers. These, too, are deeply and widely serrated, a fine border plant. *C. m. pallida*, as its name implies it, is a pale coloured form of the preceding.

C. Bononiense, 4ft 6in., produces spikes of bloom fully 2ft 6in long, and completely smothered with small pale blue flowers. *T. B. alba* is a fac-simile in everything but colour, which is snowy white. These plants occupy so little space in width that they give a maximum of flower while occupying but a minimum of space.

C. grandis, 3ft. The numerous spikes from a stout plant produce their pale blue flowers quite thickly. This is a real good border plant. *C. Burghalti*, 3ft., has immense pale blue bells, fringed at the edge, most freely produced. *C. Van Houttei*, 2ft., dark blue bells, freely produced.

C. rhomboidalis, 15in., deep blue. *C. lactiflora*, pale blue. *C. persicifolia* is still a fine border plant, growing four feet high, and producing its large saucer-like blooms in abundance. From this many superb varieties have been raised, notably *C. p. alba grandiflora* (Backhouse), which is the largest flowered of the species; pure white.

From this Messrs. Ladhams have raised several sterling varieties. *C. p. grandiflora* is an exact counterpart of the former, but in blue. Then we have *C. p. g. alba plena*, giving immense blooms of pure white, especially useful for wreath-making. *C. carpatica alba*, 1ft 6in., pure white bells, free.

Campanula spicata is a biennial, grows one to two feet high, and produces violet-blue spikes in July, such as are shown in the illustration.—E. MOLYNEUX.

Spring Bedding in Hyde Park.

The illustration of the Hyacinths in Hyde Park, on page 273, speaks for itself. Hyacinths and Tulips are magnificent flowers, stiff, if you like, but yet beautiful, and indispensable.

Royal Horticultural Society.

Drill Hall, September 15th.

This was the red letter day of the fungus specialist, and "the school" was forward in strong array. On many benches were the "Mushrooms and Toadstools," and at the lecture end of the hall there were cordons of coloured drawings representing the commoner edible species of Fungi. Besides these, the hall contained a fine exhibit of *Nepenthes* from Messrs. Veitch and Sons; Apples from Spooner and Sons; and Lettuces from Dickson and Robinson. Hardy plants, Ferns, *Begonia* flowers, and Roses were also in goodly quantity. Over 1,130 new Fellows have joined since January last.

Orchid Committee.

Present: Harry J. Veitch, Esq. (in the chair); with Messrs. James O'Brien, de B. Crawshay, W. Boxall, H. Little, J. W. Odell, H. A. Tracey, W. H. Young, J. Wilson Potter, Jeremiah Coleman, W. H. White, F. W. Ashton, A. McBean, F. J. Thorne, G. F. Moore, F. Wellesley, H. Ballantine, and J. G. Fowler.

Amongst those showing Orchids were H. T. Pitt, Esq. (grower, Mr. F. W. Thurgood), of Stamford Hill, with a bright display of fragrant species. His *Miltonia Blunti Luttersiana* was good, and *Vanda cærulea* strong. *Eulophia guinnensis*, with pale purplish lip, makes a pretty show, and with these he had a fine *Cypripedium x Felicity*, a large and beautiful flower.

Hugh Low and Co., of Bush Hill Park, Enfield, Middlesex, added grace to showy colours. They staged *Cypripedium Olivia*, *Vanda Hookeri*, *Cattleya Minucia*, *Oncidium incurvum*, and *O. carthagiensis*, and some good *Odontoglossums*.

C. H. Fielding, Esq. (grower, C. Stocking), from Southgate, had some hybrid *Cypripediums*, crosses with *C. Rothschildianum* with *Pallas*, *Massanianum*, *Elise*, and others. *C. x Vulcan* was the handsomest in colour, but *C. x Massanianum* is large in size and good in form.

James Veitch and Sons, Ltd., Chelsea, S.W., had *Cattleya Pittiana*, of most brilliant colour, bronzy gold sepals and petals, and crimson purple lip; and another form of the same hybrid with reddish bronze large sepals and petals, and finer lip. *Laelio-Cattleya Haroldiana* is very pretty with its tea coloured segments and purple lip.

Mr. Timmis, Stone Hall, Oxted, Surrey, set up a *Cattleya Loddigesii*, carrying four leads and close on forty flowers. J. M. Crooke, Esq. Hoghton, near Preston (grower, Mr. W. J. Perkes), had a really beautiful *Cypripedium* named *Rappartianum*, a *Charlesworthii* cross, which latter it resembles in many points. He also had a strange *Laelio-Cattleya*, a cross between *C. Bowringiana* and *L.-C. Clive*, and in appearance it is more like a *Dendrobium* than a *Laelia* or *Cattleya*. We note his certificated variety elsewhere.

Sir Trevor Lawrence, Bart., sent plants of *L.-C. Wellsiana* magnifica, a good flower; *L.-C. x Proserpine*, and a fine piece of *Miltonia Bleuana*. His *Disa grandiflora* carried six flowers on one spike.

Messrs. Charlesworth and Co., Heaton, Bradford, staged a very choice set, comprising *Brasso-Cattleya x gigas Digbyana*, *C. Chamberlainiana* (very handsome), *Brasso-Laelia Helen*, *Cattleya fulvescens* (very sweet), and *L.-C. callistoglossa*. With these they had *Lycaste hybrida*, a very pretty purple hybrid, the lip and petals white, spotted with purple. Their *C. x Lord Rothschild* is a perfect gem.

MEDALS.—Charlesworth and Co., Gold; H. T. Pitt, Esq., and Hugh Low and Co., Silver Floras; Sir T. Lawrence, Bart., Silver Banksian; C. Fielding, Vote of Thanks.

Fruit and Vegetable Committee.

Present: Geo. Bunyard, Esq. (in the chair); with Messrs. H. Balderson, H. Esling, T. W. Bates, S. Mortimer, Alex. Dean, Geo. Ke'f, J. Jaques, H. Markham, G. H. Maycock, Owen Thomas, James H. Veitch, A. H. Pearson, H. Somers Rivers, W. Poupart, E. Molyneux, Ed. Beckett, and Jos. Cheal.

The chief exhibits before this committee were Messrs. Spooner and Sons' Apples, and the grand, samplary collection of Lettuces from Dickson and Robinson, of Manchester. It has been a good Lettuce season in most parts, and the plants were seen to advantage. The method of staging was first-class, the plants being in lines, set up as growing, in cocoa-nut fibre, and gave one a splendid means of comparing varieties. The firm's trial ground is about six miles from Manchester, and these Lettuces were all sown on May 30, and dibbled into beds 5ft by 4ft. Amongst the Cos were *Par Excellence*, a large sort, indeed the largest; also *Giant Market*, and *Champion White*. *Little Gem* is a firm, in-hearting new one. *Prince of Wales* seems of good average size. Then the Cabbage varieties (which were numerous) comprised *Great Heart*, a tender-looking, firm plant; *Golden Head*, which contains more useable foliage; and *Buttercup* is another fine, firm, round variety, with bronzy foliage. And for general use there would seem to be no finer Cabbage Lettuce than *Unrivalled*. In this section the smallest one was *Magnet*. Of reddish leaved varieties there were *Firstling*, a fine kind; *Red Besson*, quite a



Campanula spicata.

large grower: and Continuity, of moderate size. As a large market Lettuce Dickson and Robinson's new Lord Kitchener should stand high; and as a novelty for garnishing we have here Staghorn, whose leaves are quite like a Stag's-horn Fern in miniature. (Gold Medal.)

Apples, as we note, came from Spooner and Sons, of Hounslow, and splendidly finished fruits they were; large, clean, and well coloured. Potts' Seedling, Duchess of Gloucester, Red Quarrenden, Alexandra, and all the leading sorts were here. (Silver-gilt Knightian Medal.)

FUNGI.—A. Leth Smith, Esq. (gardener, Mr. Quartermain), Silvermere, Cobham, Surrey, staged a collection of Fungi, the best known being *Russula emeticus*, *Amanita mappa*, both poisonous; *Amanita rubescens*, *Fishilia hepatica*, and others, amongst the edible sorts. It was a large and interesting collection.

Amongst others who staged collections were the following: Thomas Bristow, Manfield Cottage, Primrose Hill, Tonbridge; Dr. H. Franklin Parsons, Oakhyrst, 4, Park Hill Rise, Croydon; The Essex Field Club; Mr. Willard, Holly Lodge; A. Clark and C. Crossland, secretaries of the Mycological Club, Halifax; Yorks Naturalists' Union; J. F. Rayner, Ivy Bank, Highfield, Southampton. We furnish a report of Dr. Cooke's lecture on another page.

Floral Committee.

Present: Wm. Marshall, Esq. (in the chair); with Messrs. R. Dean, John Green, Chas. E. Pearson, H. B. May, Amos Perry, J. Walker, W. Howe, J. F. McLeod, G. Reuthe, Chas. Dixon, C. J. Salter, Chas. Jefferies, R. M. Wallace, J. W. Barr, W. P. Thomson, E. H. Jenkins, Wm. J. James, H. J. Cutbush, Chas. Blick, F. Page Roberts, and Geo. Paul.

From Messrs. J. Cheal and Sons, Crawley, came a large collection of hardy flowers and Dahlias. These included the Cactus varieties, Clarence Webb, Mrs. Mawley, Clara G. Stredwick, Gabriel, Florodora, Mrs. Carter Page, Eva, Orion, Alpha, H. J. Jones, and others. The pompons included Mauve Queen, Nerissa, Psyche, and Donovan. The singles were beautifully staged. (Silver-gilt Banksian Medal.)

Messrs. H. Cannell and Sons, Swanley, contributed a large group of Cannas in six-inch pots, and carried large heads of their gorgeous flowers. Some of the best were Niagara, J. B. Van der Schoot, Mrs. G. A. Strohlein, Miss Amy Ket, Aug. Chatin, Mrs. F. Dreer, and Black Prince. (Silver-gilt Banksian Medal.) Mr. B. Ladhams, Shirley, Hants made an effective bank of hardy flowers. (Bronze Flora Medal.)

From Messrs. Barr and Sons, Covent Garden, came a varied display of hardy flowers. The Tritomas were excellent. Gladioli were also represented in variety. Nymphaeas were also exhibited, but they wanted the sun to open them. A few pots of Colchicums reminded one of autumn. A few good Liliiums and Montbretias were noteworthy amongst the many good things here. (Silver Flora Medal.)

Messrs. Gunn and Sons, Market Hall, Birmingham, made a fine display of Phloxes, which would have been seen to better advantage had a little foliage been employed. They were beautifully developed, and had not suffered by the weather. Some of the most striking were Sheriff, Ivory, Sesostis, Hercules, Etna, Jocelyn, Miss Pemberton, Esperance, Crepuscule, Sylphide, and Iris.

Baron Sir H. Schröder (gardener, Mr. H. Ballantine), Egham, staged a table of Nerines, and very bright they were. The pots were so full of bulbs that they were overlapping each other like Shallots. (Silver Flora Medal.)

Messrs. W. Wells and Co., Limited, Redhill, made a fine display of early flowering Chrysanthemums. They were also nicely arranged. The best varieties were: Carrie, a beautiful yellow; Jason, Blush Beauty, The Champion, Polly, Kitty, Orange, Esperance, Le Parisienne (a fine white), Goacher's Crimson, Leonard Peto, Bettie, Cactus, Champ de Neige, and Horace Martin. (Silver Banksian Medal.) Mr. A. L. Gwillim, Cambria Nursery, New Eltham, staged a good exhibit of cut Begonia flowers. (Silver Banksian Medal.)

Messrs. T. S. Ware, Limited, Feltham, made a good display of hardy flowers, the Gladioli being a fine feature. Phloxes were also staged in good variety, as were also Delphiniums, Helianthus and a variety of Asters. (Silver-gilt Banksian Medal.)

Messrs. Dobbie and Co., Rothesay, exhibited a large collection of cut Fuchsia sprays. These were most interesting and generally appreciated, although it cannot be said that they lend themselves for exhibition in this way. The best were Fred Passy, General Roberts, Abbé Farges, Mr. Gladstone, Champion, President, Duchess of Edinburgh, Duchess of York, and Achilles.

Messrs. J. Jefferies and Son, Cirencester, staged six boxes of Roses equal to many seen last July. They formed a pleasing feature to the show. (Silver-gilt Flora Medal.)

A large display of hardy flowers came from Messrs. W. Cutbush and Son, Highgate, the Phloxes, Pentstemons, Rudbeckias, Montbretias, and Asters were most prominent, the whole exhibit being tastefully arranged. (Silver-gilt Banksian Medal.)

A glorious display of Pitcher-plants (*Nepenthes*) were arranged by Messrs. Jas. Veitch and Sons, Limited, Chelsea, occupying half one of the central tables. The plants were in grand condition,

some carrying as many as forty pitchers. The leading sorts were *Nepenthes Wrigleyana*, a grand plant; *N. Rafflesiana*, *N. rufescens*, *N. Mastersiana*, *N. Hookeriana*, *N. Tiveyi*, *N. sanguinea*, *N. ampullaria vittata*, *N. distillatoria*, *N. intermedia*, *N. ventricosa*, *N. bicalcarata*, *N. Sir W. Thistleton Dyer* (a grand hybrid), and *N. mixta*. The firm also staged *Senecio tanguticus*, *Eupatorium japonicum*, *Smilax sagittifolia*, and *Achnidia chinensis*, the latter a plant with Vine-like foliage, and grows 14ft. in a season; grand for covering rough screens, &c. (Gold Medal.)

Mr. H. B. May, Dyson's Lane Nurseries, Upper Edmonton, staged a fine exhibit of *Adiantum Farleyense*, ranging in size from decorative plants to those of specimen size, the whole of them being well grown and perfect in colour. (Silver Banksian Medal.)

Messrs. W. Bull and Sons, Chelsea, contributed a splendid group of fine-foliage plants. The chief plants were *Kentia Fosteriana*, *Cocos Weddelliana*, *Dracaena His Majesty*, *D. Victoria*, and *D. Goldiana*. The Crotons were all well coloured, while a nice display of *Gymnogrammas* and *Ficus radicans variegata* completed the display. (Silver Flora Medal.)

Ferns came from Messrs. J. Hill and Son, Barrowfield Nurseries, Lower Edmonton, and were nicely arranged. The plants included some capital specimens, and several of decorative size. The *Gleichenias* were the chief features, and included the following Ferns:—*G. semivestita*, *G. Flabellata*, *G. dicarpa*, *G. Spelunca*, and *G. dicarpa glauca*. *Pteris* and *Adiantums* were also strongly in evidence. (Silver Flora Medal.) Messrs. Paul and Son, Cheshunt, also staged hardy flowers in large bunches.

Certificates and Awards of Merit.

Cattleya Loddigesi, from Mrs. Timmis, received a Cultural Commendation.

Cypripedium Lawrenceanum Gratrixianum (T. M. Crook, Esq.).—The large dorsal sepal is white, with bold green veins, and the pouch is dull green. A.M.

Cypripedium Rappartianum (T. M. Crook, Esq., Houghton, near Preston).—Parentage: *C. Lathamianum* × *C. Charlesworthi*. A pretty form, like that of the latter parent, the dorsal sepal purplish with silvery edge, and the pouch brownish. A.M.

DAHLIAS.—The following received Awards of Merit:—

Dainty, Cactus ("Hobbies," Ltd.).—Primrose creamy centre, with rosy-mauve outer petals. A.M. R.H.S., and F.C.C. N.D.S.

George Gordon (Stredwick and Son).—Canary yellow centre, ruddy lower. Cactus.

Darkness, single (Cheal and Son and T. W. Ware, Ltd.).—Intense, deep blackish crimson, with yellow boss. A.M. R.H.S., and F.C.C. N.D.S.

Mrs. H. Brousson, Cactus (J. Stredwick and Son).—A bright and showy Dahlia, coloured bronzy-golden, slightly rosy tinted. A.M. R.H.S., and F.C.C. N.D.S.

F. M. Stredwick (J. Stredwick and Son).—A large Cactus, quilled petals, creamy white, with paler centre. A.M. R.H.S., F.C.C. N.D.S.

Queen of Whites, pompon (Chas. Turner).—A neat and pretty milk-white. A.M. R.H.S.

Princess of Wales (Cheal and Sons).—A pink single variety. A.M. R.H.S.

San Toy, pompon (C. Turner).—Creamy white, heavily edged purple.

Sweet Nell, Cactus ("Hobbies," Ltd.).—A pretty, rosy, shell-pink, good flowers, but hanging their heads. A.M. R.H.S., and F.C.C. N.D.S.

Dahlia, Rosebank Scarlet (Edward Mawley, Esq.).—A rich, scarlet-crimson single, with orange disc. F.C.C. N.D.S.

Sidalcea candida, Rosy Gem (T. S. Ware (1902) Ltd.).—The flowers are large, saucer-like, and profuse. The colour is a decided rose-purple. A.M.

Smilax sagittifolia (aspera) (J. Veitch and Sons, Ltd.).—The leathery leaves are over 4in deep, and as broad. They are heart-shaped, with rounded lobes, and are glossy on the surface. The colour is bright green, tinged with bronze. The hardy *Smilaxes* are not well known. This is a good climber. A.M.

Senecio tanguticus (J. Veitch and Sons, Ltd.).—A hardy border plant, with half-woody brown stems, growing erect to 5ft. and bears alternate leaves. These are bright green, deeply lobed, and the partitions again incised. This makes it very distinctive. The terminal inflorescences are loose and panicle, the starry flowers being deep yellow. A.M.

Zygopetalum Balli Roeblingianum (C. G. Roebling, Esq.).—This showy *Zygopetalum* (lip large, purple at base, fading to nearly pink at edge, and mottled with white, the segments green and brownish) will be sold by Protheroe and Morris to-morrow (Friday), and the proceeds will go to the R.H.S. Building Fund. F.C.C.

Pelargoniums Ward off Snakes.

Pelargoniums in South Africa are said to be efficacious preservatives against snakes, as, though the flowers are in a sense scentless, the leaves contain a pungent odour, and, therefore, no snakes will approach a bed of the flowers. In the old colony, especially in those parts which are the hunting grounds of the puff-adder and the ringhals, it is common at farms to see beds of Pelargoniums at the homestead, and the plants in pots as close to the bedrooms as possible.



Figs under Glass.

EARLIEST FORCED TREES IN POTS.—Figs are more appreciated than formerly, and the earliest supplies are highly prized for dessert. Those out in large pots, say 13in or more, should have the roots examined, and as it is not advisable to increase the size of pot, a few inches of soil may be removed from the base of the balls. Loosen these a little at the sides to admit of fresh compost; remove the surface soil as far as loose, shorten the roots, and repot in fresh compost. Let this be of turfy loam, with a sixth of old mortar rubbish, and a handful of bonemeal with a quart of wood ashes and a pint of soot to each bushel of compost, thoroughly incorporated. Afford a good watering, and place the trees where they can have plenty of air, with shelter from heavy rains and snow, also safety from frost.

Trees in large pots that are stood on brick pedestals to prevent their sinking require different treatment. In their case every particle of old fermenting material (Oak or Beech leaves) should be removed, also all the surface dressing from amongst the roots, with a handfork. After shortening the strongest roots and attending to the drainage, apply a surface dressing of the compost named, with a fifth of well-rotted manure added, and ram it firmly into the pots. Supply water to settle the soil, and after that keep the house cool, dry, and well-ventilated until the time of starting in November or December. This method answers well for trees in 18in or 20in pots.

SUCCESSION HOUSES.—Remove all soft and useless growths, thin out where crowded, and when the fruit is gathered, cut away the growths that have reached the extremity of the trellis, and are not necessary for next year's bearing.

UNSATISFACTORY TREES.—Unfruitfulness is generally a result of exuberance, and commonly induced by too large and too rich borders. Lifting sterile trees is a certain means of promoting fertility, and should be performed as soon as the leaves have commenced turning yellow. Good drainage is of great importance, and should not be less than a foot thick with a drain to carry off superfluous water. There is nothing better for drainage than brickbats, with a thin layer over them of old mortar rubbish. Good turfy loam, preferably calcareous formation and interspersed with calcareous gravel or flints, when it needs no admixture, otherwise add a sixth of old mortar rubbish and a similar proportion of road scrapings. This forms a suitable compost for Figs, and 2ft depth of border is ample. The compost should be moderately moist when used, and a watering given to settle it. Keep the house cool and dry. A border of about one-third the width of the trellis, say 4ft to 6ft, is much better than a wide border, for what is wanted is a sweet calcareous soil firmly put together, yet so friable as to admit of the free percolation of water through consistently with retaining the elements essential to the production of Figs.—GROWER.

Pine Suckers.

Those recently started should be raised near the glass as soon as the roots are plentifully made, so as to secure a sturdy, thoroughly solidified growth, especially in plants intended to be wintered in small pots. When the suckers become well rooted, transfer the strongest started in late summer to the fruiting pots at once, draining these well. Employ the fibrous part only of sound turfy loam, in lumps proportionate to the size of the pots. Jamaicas are apt to become weak and attenuated in growth when grown in large pots; 9in or 10in suffice for them, and they must not be grown away from the glass, or be kept very close and moist. Queens succeed in 10in pots, or very strong plants may be given a little more root space, say 11in pots; Envoies have all their requirements as regards soil supplied in 10in pots. Smooth-leaved Cayennes succeed in 10in pots, 11in at most, and Providence in 11in or 12in pots. The small plants should be shifted into 7in or 8in pots, in which they must be kept until spring. Plunge the pots in a bottom heat of 90deg to 95deg, in which they must be continued until the roots have taken freely to the fresh compost, when they may be raised, a temperature of 85deg being afterwards sufficient.

GROWING STOCK.—Young plants require free ventilation on all favourable occasions to keep them in a healthy, sturdy condition, maintaining a night temperature of 60deg to 65deg, with 5deg to 10deg more by day artificially, unless dull and cold, and keep at 80deg to 85deg from sun heat. Ventilate early in the day, but not so as to lower the temperature, keeping the bottom heat steady at 80deg. Water the plants whenever they require it, employing weak and tepid liquid manure. Avoid the use of the

syringe too frequently, as sprinkling the plants in the morning and evening will suffice in all but very bright weather. Fruiting plants should have a night temperature of 70deg, with 80deg to 90deg by day, closing at 85deg.—PRACTICE.

A Pot Nectarine.

Following the article on "Orchard Houses" in our preceding issue, we have had a specimen pot Peach tree figured. Trees such as the one on this page are amongst the most profitable subjects in a garden. Year after year, for thirty years on end, the same sized pots will do for them, and every season they can be expected to yield a good crop. By reducing the root-ball annually, and supplying fresh, rich, loamy compost, the tree maintains its fertile condition. The orchard house treatment is simple, and a large number of varieties of all kinds of fruits can be grown side by side. Messrs. Rivers and Son, of Sawbridgeworth, make a speciality of such specimen pot trees as the one we here notice.

Strawberries in Pots.

The plants must not be neglected in watering, but they are seriously injured by continuous needless watering. The varieties intended for early forcing should soon be given the protection



A Pot Nectarine.

of frames, only using the lights in frosty weather and to throw off heavy rains and snow, ventilating freely when the weather is mild, withdrawing the lights when fair, and when wet tilting them. Any plants that have the soil very wet, and remain so for some time without watering, should have the drainage seen to. The crowns are often too numerous, though some varieties, as La Grosse Sucrée, are single crowned, while other sorts, as Vicomtesse Héricart de Thury, have many crowns.

Where a number of small crowns cluster round the central one, remove the small ones sideways with a wedge-like piece of wood without injuring the central crown or crowns or the leaves. This will concentrate all the vigour of the plant on the chief crown or crowns, and though there will be fewer trusses of bloom there is no need to fear a deficiency of crop. There is nothing like a loose surface for Strawberries in pots, which prevents the soil leaving the sides of the pots, and admits of the water passing evenly through the ball, moistening the soil thoroughly.

A little dried cow manure or horse droppings, rubbed through a 4in sieve, applied to the surface of the pots, will keep all right there. Remove all runners, as they appear, also weeds, and do not allow the plants to suffer through want of room, giving them plenty of space for the full exposure of the foliage to light and air, which is essential to a steady growth, and plump, well-developed crowns.—G. A.

Societies.

Edinburgh Autumn Show, September 9th and 10th.

Continuing our report of this highly successful exhibition, we may say that more minute inspection than we had had time to give it confirmed the first idea of its great excellence, poor season notwithstanding. Not in one section, but in all, if it did not reach the highest water mark of some previous Edinburgh shows, it was little inferior to the best of them; possibly this was somewhat owing to the extent, variety, and beauty of the trade non-competitive exhibits, which probably surpassed all the previous efforts of the trade, and hid any deficiencies in the exhibits of private growers. As usual at the Edinburgh autumn shows, the most prominent feature in the competitive classes is

FRUIT.—The exhibits were somewhat short of some previous seasons, but with very few exceptions the quality was excellent. The first and most prominent on the list was for the best table of dessert fruit, decorated with plants or flowers. There were three entries, and for fruit Mr. Goodacre, Elvaston Castle, had an easy victory gaining 106½ points for sixteen dishes; viz., twenty-eight points for four dishes Grapes; Apples, two dishes, six and a half and seven; Melons, seven and eight; Pears, seven and a half and eight; Plums, seven; Figs, six; Nectarines, two dishes, seven and seven and a half; Peaches, two dishes, seven and nothing; these were mostly of superb quality. Mr. Kidd, gardener, Carberry Tower, was second with 90½ points. His Grapes were good, but some of the other fruits a little deficient. Mr. Smith, Oxenford Castle, was third, 86½ points. The prizes for decoration in this class were awarded separately, Mr. Kidd receiving first with 25½ points out of 28. His flowers were largely *Gloriosa superba*, Sunrise Roses, *Franeoa*, *Gypsophila* and *Smilax*. The effect was rich, but much too heavy for the size of table. Mr. Smith received second for decoration with 21½ points, and Mr. Goodacre, with a sweet, elegant arrangement, only third, with 15 points. Many thought this should have been first, and in any case it was difficult to see why it was not second. It is not usually considered good taste for dinner table glasses to have such heavy flowers as white *Lapageria* dangling on the end of a wire, and two shades of pink Carnations used were not a harmonious blend.

The next prize in importance was for ten dishes of fruit. Mr. Goodacre was again first with fine Muscat of Alexandria and Madresfield Court Grapes, a good Queen Pine, Melon, Princess Peaches, Figs, Albert Victor Nectarine, Directeur Hardy Pear (extra fine), and a Gage Plum. Second, Mr. McKinlay, gardener, Wrest Park, Amptill. For twelve dishes hardy fruit, grown out of doors in Scotland, Mr. James Day, Galloway House, was first. For twelve dishes orchard house grown fruit Mr. Goodacre was easily first with grand specimens, his Apples and Pears being specially fine. Mr. Greenlow, gardener, Benmore, was second with fair fruit.

The class for six bunches of Grapes excited more interest than any competition in the show, as it had come to be known that Mr. Goodacre and the Messrs. Buchanan, of Kippen, would renew their Shrewsbury contest. The various exhibits under this class were excellent, and after long and careful examination Messrs. Buchanan were awarded first with two bunches each Muscat of Alexandria, Alnwick Seedling, and Black Alicante, gaining 49½ points out of a possible 52. Mr. J. Beisant, gardener, Castle Huntly, was second with fine examples of Muscat Hamburg, Muscat of Alexandria, and Madresfield Court, 47½ points. Mr. Green, gardener to C. M. Palmer, Esq., M.P., was third with 44½ points. His bunches were large and handsome, especially Gros Maroc and Muscat of Alexandria. In this class Mr. Goodacre was not placed. For four bunches Mr. Goodacre was first with Black Hamburg, Muscat Hamburg, Madresfield Court, and Muscat of Alexandria. These were awarded 27 points. Messrs. Buchanan got second award, with fine bunches, receiving 25½ points. Mr. Green was again third. For two bunches Muscat of Alexandria Mr. Hughes, gardener, King's Meadows, Peebles, was first with large, handsome bunches, not quite finished in colour. Second, Mr. Goodacre. For two bunches Black Hamburg Mr. Goodacre was first, Mr. Grieve, Kirkcaldy, second, and Mr. Kidd third. In a number of one bunch classes for various sorts, Mr. Goodacre, Mr. Green, Mr. Hughes, Mr. Grieve, Mr. Kidd, Mr. Sutherland, Polmont, and Messrs. Buchanan gained leading honours. Mr. Kidd was first with the new Grape, Diamond Jubilee; but the bunches were small, and hardly what was expected of this much-talked-of novelty.

Among miscellaneous fruits there was a fair competition, but except in classes confined to Scottish growers, the brethren from the South received most of the honours. In the class for twelve varieties of Apples, grown in Scotland, for which the Dunn Memorial Medal and £3 were given as first prize, there were no fewer than eleven competitors, mostly very good fruit for the season. The much coveted first award was gained by Mr. R. Sinclair, Congleton Gardens, East Lothian, with handsome fruits of leading varieties, mostly cooking. Mr. Day, Galloway House,

second; and Mr. Murray, Culzean Castle, third. Amongst "small" fruits there was nothing remarkable, good Currants and remarkably fine Raspberries from Mr. A. Dickson, Innerleithen. The Caledonian Society offer awards in fully forty classes of different Apples, which seems too many, as a number of the exhibits were most uninteresting.

Mr. Smith, Esq., Prestwick, Ayrshire (gardener, Mr. Lawrie), exhibited a choice collection of pot grown Apples, which were of very high quality. The specimens of Ecklinville, Peasgood's Nonsuch, Allington Pippin, Bismarck, &c., were very fine. A silver medal awarded.

PLANTS.—The various classes were well filled, but speaking generally were not up to a high standard of cultivation. Compared with plants seen at the leading South shows, those in Edinburgh seem poor, and are not equal to the specimens that have at times been the glory of Waverley Market shows. For a group Mr. Wood, Oswald House, was the only competitor, with a collection not rich, but graceful, and in arrangement was an improvement on Mr. Wood's usual exhibits. For four stove and greenhouse plants Mr. Wood was first, and Mr. McKenna, Ratho, second. In three Orchid classes, Mr. Sharpe, Freeland, Forgandenny, was first, and Mr. Wood second. Specimen Ferns were fine, Mr. Bruce, Murrayfield, being first with handsome plants, and Mr. Wood second. For *Adiantums* Mr. Moudie, Musselburgh, was first, and Mr. Pearson second. Dwarf British Ferns were a beautiful class, Mr. Brown, Waterloo Place, taking leading honours with very beautiful plants. Begonias were fairly good, and Fuchsias were well grown. Among foliage plants those shown by Mr. Thom were very attractive.

CUT FLOWERS.—The display of cut flowers was most extensive, and speaking generally the exhibits were fine, and more than anything added to the resplendence of the hall. Hardy border plants were a specially fine show, exceeding anything seen anywhere this season. Sweet Peas were a good show, but miles behind Shrewsbury, where the display was grand in the extreme.

For Gladioli there were three competitors in each class of twelve and six spikes, and in both classes Mr. Bennett, Berwick-on-Tweed, Mr. Lawrie, Prestwick, Ayrshire, and Mr. A. Brydon, Innerleithen, were first, second, and third respectively. The quality was fine. For twelve Begonias Mr. Johnston, East Linton, was first with very fine blooms, and the Rev. R. Rodgers, from the same place, was a good second. For twelve Show or Fancy Dahlias Mr. Sutherland, Kirkintilloch, was first. The same gentleman was first for Cactus Dahlias and second for pompons. Mr. Thos. Robertson also showed well in the Dahlia classes. For twelve bunches Sweet Peas Mr. Malcolm, Duns, was first with a very fine lot, Mr. McKenzie, Aviemore, second, and a well-known grower, Mr. Duncan, Fogo, third. They were all fine considering the lateness of the season.

For six Orchids Mr. Sharp, Freeland, was first, and Mr. Veitch, Carlisle, second. Roses were fair for the season. In the class for twelve blooms Mr. Bennett, Helensburgh, was first, and the veteran rosarian, Mr. Parlane, Row, second.

For twelve Tea Roses Mr. Parlane was first and Mr. Bennett second. Roses in vases were a good show, but generally speaking not well set up. Mr. Whyte, Helensburgh, was a leading prize-taker, and also Mr. Parlane. In the classes for six vases Mr. Parlane was first, but the exhibit could hardly be called one of Roses in vases. About two dozen Roses tied to a stick with moss and squeezed into a vase is surely not the intention of the prize. Mr. A. Todd, Musselburgh, who was second in this class, had vases of good Roses, beautifully arranged. Pansies and Violas were a small show.

In the class for twelve blooms Chrysanthemums, not less than six varieties, Mr. Thos. Baird, Cambus, was first with marvellous blooms for September. Madame Gustave Henry and W. H. Lincoln were both very fine. Carnations were a nice show. Shown in vases these far eclipse the old method of single blooms on stands. Mr. Brydon, Innerleithen, had all the first prizes, followed hard by Mr. Bennett, Tweedmouth. In the classes for twelve and six hardy herbaceous perennials Mr. Brydon was first and Mr. Thos. Robertson second in both classes, with very fine exhibits, splendidly staged. *Eucomis regia*, *Lobelia Queen Victoria*, *Chrysanthemum maximum*, *Coreopsis grandiflora* were specially noticeable. For twelve bunches hardy border flowers Mr. Robertson was first and Mr. Brydon second, with handsome stands.

Asters were fairly good, but these should be shown in vases, and would be a welcome addition to a show. On boards with paper collars they are not worth looking at. Mr. Veitch, Carlisle, led with quilled, and Mr. Forest, Alexandria, with flat petalled varieties. Annuals were good and mostly well displayed loosely in vases. Mr. McAndie, Inveresk, was first with a handsome selection.

Bouquets were a small class, but fairly good, considering that the competitors (all ladies) seemed to be amateurs, the white shower bouquet by Miss Mackintosh being very elegant. For the most tastefully arranged dinner-table decoration on a space 5ft by 3ft, there were five competitors, showing fairly elegant work. The first prize was awarded to Miss Mackintosh, but

tastes seemed to differ much as to whether or not she deserved it. Her exhibit was rich, but certainly not elegant.

VEGETABLES.—In the collection for twelve kinds, Mr. Gibson, Danesfield, Great Marlow, towered above his fellows, which was as handsome a collection as ever exhibited, but judging from the points awarded compared with the possible obtainable, the judges had not thought so. They must have been in a severely critical mood. His Onions, Cauliflowers, Celery, Leeks, Carrots, and Beans were specially good. Mr. Harper, Tulliebelton, was second with a very fine lot, and Mr. Rae, Sunlaws, was third. In the separate classes for vegetables there was a very large display, mostly of good quality. Mr. Kidd was first for fine Cucumbers. Mr. Macdonald, Polmont, for twelve very fine Tomatoes, Mr. Harper for Peas, and Mr. Mackinlay, West Park, for Beans. Mr. Waldie, Dollar, had beautiful Celery. For twelve Leeks there was a keen contest, Mr. Macmillan and Mr. J. Cairns being first and second, both gardeners to the Earl of Home at different residences. For twelve Onions Mr. D. Murray was first with very fine samples of his Ailsa Craig. Mr. Caldwell, Polmont, was first for twelve varieties of Potatoes, six of each, and also for twelve kidney Potatoes, Mr. Hood, St. Boswell's, being first for twelve round Potatoes.

Nurserymen's Competition.

These were a prominent feature in the show, the Roses especially surprising everybody both as to their quality and quantity. For a collection of hardy flowers, not exceeding 100 bunches, a class in which there has been many a keen fight in Edinburgh, Messrs. Cocker and Son, Aberdeen, had matters all their own way, their usual opponents from the South being absentees; but the collection staged was well up to their reputation, and was a leading feature of the show. For thirty-six Gladioli, Messrs. Mair and Son, Prestwick, were the only exhibitors, but their stand was of outstanding merit. Dahlias were a splendid class. For a collection on a space 7ft by 5ft Mr. R. J. Hammill, manager, the Vineries, Acock's Green, was first easily with a very beautiful display, where quality and beauty of arrangement were both conspicuous. Messrs. Campbell and Son, Blantyre, were second with a good lot. They were also first for eighteen bunches and twenty-four blooms Cactus Dahlias, Mr. Smellie, Busby, following them in both classes. Mr. Smellie took the lead for twenty-four Show and Fancy Dahlias, Messrs. Campbell following, and for vases of Cactus and Pompon Dahlias Mr. Hammill was first.

The Rose classes were a most beautiful show, and the various prizes were most keenly competed for, chiefly by the old rivals, Messrs. Cocker, Croll, Dundee, and Hugh Dickson, Belfast. Messrs. Cocker had a long way the best of matters—it seemed to be their day. They were first for thirty-six, eighteen, and twelve blooms, with fine stands of good sized fresh blooms of beautiful colour, prominent among them being Captain Hayward, Madame E. Verdier, Marchioness of Londonderry, Caroline Testout, Mrs. J. W. Grant, Papa Lambert, &c. In all three sections Messrs. Croll, Dundee, were second, and Mr. Hugh Dickson third for thirty-six and eighteen. In Tea Roses Messrs. Croll and Adam and Craigmile were first and second. For twelve crimson Roses Messrs. Croll were first with beautiful blooms of J. S. Mill, and Messrs. Cocker second with very handsome Marie Baumann. For twelve pinks Messrs. Cocker were first with Mrs. Grant and Messrs. Croll second with Mrs. John Laing. For twelve vases of Roses (H.P.'s barred) Messrs. Ferguson, Dunfermline, were first and Messrs. Cocker second, a decision that would have been reversed if Messrs. Cocker had devoted a little more time to arrangement. For a collection of Roses to occupy a space 5ft by 5ft Messrs. Cocker were easily first with a very beautiful stand, prominent being a splendid lot of Alfred Colomb, Caroline Testout, Ards Rover, &c. An arch, mostly of Dorothy Perkins Cluster Rose, was very admirable. This class should be allowed a little more space. Cut Chrysanthemums were not remarkable, but Carnations and Picotees in vases were good, Mr. Whitehead, Selkirk, leading for Carnations and Messrs. Campbell for Picotees.

TRADE EXHIBITS.—These were, as usual, very numerous and good, and they contributed much more to the imposing and beautiful appearance of the market than the competitive part of the exhibition. So popular is the Edinburgh Autumn Show with trade exhibitors that it will soon be difficult to find space for them all in the Waverley Market. The flower and plant loving public are greatly indebted to the nurserymen exhibitors, as they have no other means of seeing many of the beautiful things shown.

The most prominent group was that of Messrs. Laird and Sons, Ltd., occupying over 1,000 feet of space, and was one of the most imposing ever put up even by this large-minded firm. Huge Palms, Bamboos, Dracenas, Crotons, &c., laid out in a unique and interesting manner, filled in with beautiful clumps of Mollis Azaleas, Liliiums, Eulalias, Orchids, &c., rendered this great exhibit a most attractive feature. One Palm (*Phoenix rupicola*), with a spread of over 20ft, was a source of great admiration. A gold medal was awarded. Another gold medal collection was the

beautiful exhibit of Messrs. Thos. Methven and Sons, arranged in an elegant and chaste manner: the effect was very pleasing. In the centre was a large group with Palms, Acers, Clematis, &c., surrounded by smaller groups of Liliiums, Chrysanthemums, Crotons, very beautiful Cocos Palms, &c.

Messrs. Dickson and Co.'s group was very large and imposing, with wealth of colour, largely supplied by their new double salmon bedding *Pelargonium Coronation Gem*. Some Vines in beautiful fruit, and others with striking foliage, were a feature in this fine exhibit, also beautiful vases of Roses. A silver-gilt medal was awarded. Messrs. Cunningham and Fraser, Edinburgh, had a splendid group of shrubs, including grand specimen Hollies; also a most attractive display of hardy border flowers. (Gold Medal.)

Mr. John Downie's exhibit was on a table and had a most imposing effect, largely consisting of cut flowers (arranged with great ability), hardy flowers, Carnations, Begonias, Violas, &c., being most noticeable. (Silver-gilt Medal.)

Mr. John Forbes, Hawick, exhibited a stand such as he is noted for, of everything choice in florists' flowers, Carnations, Phloxes, Pentstemons, Dahlias, &c.; also a circular group on the floor of East Lothian Stock and Hollyhock spikes, which were rather bare for effect. (Silver Medal.)

Messrs. Storrie and Storrie, Dundee, had a most attractive table and most beautifully arranged, of Apples in pots, Begonias, Cockscombs, Feathered Celosias, Streptocarpus, new Iceland Poppies, and a host of other things. This was one of the most attractive exhibits in the show. (Silver-gilt Medal.)

Messrs. Dobbie and Co., Rothesay, had a gay and beautiful stand well arranged, as all their exhibits are, prominent being Cactus Dahlias (including their new gem *Lucifer*), Chrysanthemums, Violas, and Fuchsias of fulgens strain, of which one (R. H. Hennell) received an award of merit. (Gold Medal.)

Messrs. James Grieve and Sons, Redbraes Nurseries, had a beautiful exhibit of hardy flowers, including early Chrysanthemums, Violas, Carnations, and other attractive subjects, an award of merit being given for their new white Chrysanthemum, J. C. Grieve. (Silver Medal.)

Messrs. Laing and Mather, Kelso, had a large table of cut Carnations in great variety and choice quality, most elegantly arranged. At each end of the table was a miniature rockery planted with alpine gems, the whole having a pleasing and fascinating aspect. (Gold Medal.) Messrs. Campbell and Sons, Blantyre, exhibited choice variety of Cactus Dahlias, Carnations, &c. (Silver Medal.)

Mr. Henry Eckford, Wem, had his usual special exhibit of Sweet Peas, which were highly interesting, but his collection this season, while containing all the choicest sorts with which his name is associated, had little of novelty. Dorothy Tennant was the only one present that the public were anxious to see. Samples of Edward the Seventh and Scarlet Gem would have been welcome. (Silver Medal.)

Messrs. Wm. Thomson and Sons, Ltd., Clovenfords, had a nice table of decorative plants, and baskets of Grapes and Tomatoes grown with their well-known stimulants. (Silver-gilt Medal.) Messrs. Kent and Brydon, Darlington, had a small but interesting collection of Carnations. (Bronze Medal.)

A dainty corner in the exhibition was under the south gallery, where four of the most attractive exhibits were located. Messrs. Blackmore and Langdon, from Bath, presenting a charming stand of double Begonias, which captivated the fancy of the northern growers, no such beautiful exhibit having been seen here before. W. Sparshott (bright scarlet), Dorothy Hardwick (pink), Avalanche (white), and Countess of Warwick (golden apricot) were very beautiful. (Silver Medal.)

Mr. T. Jannock, the noted Lily grower from Dersingham, made his first appearance in Edinburgh, with a very dainty exhibit of Lily and retarded Lilacs. The Lily was the magnificent variety known as "Fortin," and was ahead of anything ever seen here before. The Lilacs were in beautiful bloom. (Silver Medal.)

Mr. A. F. Dutton, Bexley Heath, who has recently leaped into fame as a grower of perpetual Carnations, had a very beautiful exhibit, set up with charming taste, which gave the exhibit quite the air of novelty. Floriform, Royalty, H. B. Crane, Madame Melba, and others were very fine.

Messrs. Todd and Co., florists, Shandwick Place, had for their exhibit "A Dream of Roses," and was perhaps quite the most dainty setting ever accorded the queen of flowers. A table 16ft in length was devoted to bouquets, baskets, a magnificent harp standing 5ft high, an upright cross of white Roses, charmingly sprayed with pink, a wreath of crimson and pink, and a lyre of Pearl and Sunset yellow Roses, set in *Prunus Pissardi* foliage. The whole was nicely upholstered, and was a source of great attraction to visitors. (Gold Medal.)

Messrs. James Dickson and Sons, Edinburgh, were awarded a Silver Medal for a small collection of cut flowers and a fine lot of standard Bays, used to decorate the entrance hall. The Ranelagh Nursery Company, Leamington, had a nice lot of their new *Asparagus myriocladus*. (Bronze Medal.)

Messrs. Lister, Rothesay, had miscellaneous cut flowers (Silver Medal); Mr. James Rowatt, Glassford, a nice table chiefly Pentstemons of best varieties (Bronze Medal). Mr. Wm. Angus,

Penicuik, exhibited a nice stand of his beautiful new form of *Chrysanthemum maximum* King Edward, for which he was awarded a Certificate of Merit.

The attendance of the public during the two days was very large, the drawings at the styles amounting to nearly £430. This is a very large sum when the number of members and subscribers, who all get a number of free tickets, is taken into account. The cash drawings were £45 ahead of last year. Mr. Thomson, the energetic secretary, deserves great credit for the admirable way in which all the work was arranged and carried out, as well as for his praiseworthy courtesy and obligingness in what is often rather irritating circumstances.

The horticultural public will be glad to learn that at a meeting held on Saturday last of the Council of the Royal Caledonian Horticultural Society, it was resolved to hold a great international exhibition of fruit and flowers in autumn of 1905. Immediate preparations are to be made to carry this out on a scale of greater magnitude than any of the previous international exhibitions successfully held under the auspices of the Old Caledonian. The last International took place in 1891.

National Dahlia, Northern Division.

The National Dahlia Society held its second show of the season at the Royal Botanical Society's Gardens, Manchester, on Friday and Saturday last; and considering the terrible storms of the past few days the show was unusually attractive, few soiled flowers being found in the stands. The general arrangement throughout was of more than ordinary merit. Mr. Weathers and Mr. Paul did all in their power to cater for the visitors by providing good music and plenty of promenading space. Many of the classes were lacking in competition, but the quality was most even throughout.

For thirty-six Show Dahlias, Mr. C. Turner, of Slough, was first with excellent flowers. Mr. S. Mortimer (who had suffered most severely from the storm) was a very good second, the flowers being smaller. Mr. J. Smellie, Busby, was a fine third. For twenty-four Show and Fancy varieties, Mrs. M. V. Seale, Vine Nurseries, Sevenoaks, was the only exhibitor. Only two staged in the class for twelve ditto, Messrs. J. Cheal and Sons winning with capital blooms.

The class for twelve varieties of Cactus, six flowers of each, brought out a charming set; and Messrs. Stredwick and Son, Silverhill Park, St. Leonards, took the lead. Messrs. Keynes, Williams, and Co., were a splendid second with telling blooms of Minnie West, Raymond Parks, Imperator, and Mrs. H. J. Jones; third, Messrs. J. Cheal and Sons. For the twenty-four Cactus, Keynes, Williams, and Co. scored, and Mr. J. Smellie was a smart second. The grand class in the show was undoubtedly that for twelve vases of Cactus Dahlias, arranged for effect, brought out some really good work on the part of Mrs. M. V. Seale. Messrs. Keynes, Williams, and Co., for second place, displayed good treatment in their work. Reliance (salmon, gold centre, a seedling), Gladiator, J. H. Jackson, Pink Pearl, and Mrs. Clarke were their best blooms. Mr. W. Treseder was third.

The pompon Dahlias attracted much attention, Mr. C. Turner taking honours with pretty flowers. Mrs. Seale second, and a very dangerous third were Messrs. Keynes, Williams, and Co., the flowers not being quite so large. The single Dahlias possessed a fascination for all. Messrs. Cheal were the winners.

The amateur section was moderately filled, but there were many striking flowers amongst them. The Show and Fancy Dahlias were quite equal to those in the professional classes. For twenty-four Show and Fancies, Mr. T. Jones, Bryn Penylan, Ruabon, led with typical flowers; Mr. E. T. Matthews, Derby, second. Mr. E. T. Matthews carried the honours for twenty-four Cactus, and Mr. J. Pilling was second. Mr. F. H. McGrath, Huddersfield, won for the twelve.

Messrs. Stredwick gained five certificates for new varieties, some of which did not appear to be any improvement on existing sorts. Comet, a deep heliotrope, striped crimson; Rainbow, rich rose but very thin; Hereward, warm creamy purple, and violet striped; George Gordon, yellow; and Mary, a Fancy Cactus.

TRADE EXHIBITS.—"Hobbies," Limited, Dereham, had a staging of sixty feet filled and arranged in the best style. A large gold medal was awarded.

Messrs. Dobbie and Co., Rothesay, sent of their best. Dahlias, Gladioli, herbaceous and florist flowers; in fact, everything for which they are famous was shown to perfection. The arrangement of colour was of the finest, and the large gold medal well deserved.

Yet another sixty feet was admirably filled by J. H. White and Son, Worcester. Phloxes, Scabious, early Chrysanthemums, Montbretias, amongst which was a handsome new seedling, yellow, with crimson blotch. Lobelias, Gladioli, Althæas in variety, and double Gypsophila. They exhibited a grand Tomato, White's Majestic, one bunch of seven fruits weighing 3½ lb. The gold medal was well deserved.

Mr. John Robson, Bowdon, secured the gold medal in competition for the best collection of herbaceous plants. They also secured the silver-gilt medal for a most beautiful collection of Dahlias in the best of varieties.

Messrs. Dickson and Robinson, Manchester, caused quite a sensation with their interesting display of Lettuces planted in cocoa fibre, quite a show in themselves. Their display of Dahlias, Gladioli, &c., were staged in extra choice variety.

On the opposite side the same degree of excitement was caused by the magnificent show of Tomatoes from Messrs. Dickson, Brown, and Tait, Manchester, consisting of 70 plates in 50 varieties and baskets, a very fine object lesson for connoisseurs, so well were they grown. Worth recording were: Invincible, Queen Alexandra, seedling, very free and handsome. Crimson King, extra good. Bunn's Superlative and Best of All in reds, and Golden Jubilee and Sunbeam in yellows. All the Fancy varieties were well represented. The highest award was granted to both firms. Mr. Edwards was well to the fore with his table decorations.—R. P. R.

North Middlesex Dahlia.

This was held on September 9 and 10, and was the third exhibition of this growing society, and it took place as last year in the large hall of the Alexandra Palace, rather more than one half of it being filled with exhibits. The arrangements of the exhibits were considerably enhanced by a number of large specimen plants, and also groups of Ferns contributed by Mr. G. Hemming, the superintendent of the Palace Grounds. Certificates of merit were awarded to a promising new white Cactus Dahlia named Mrs. D. B. Crane, white, with primrose centre; and single Queen Alexandra, of charming heliotrope pink tint.

A certificate of merit was awarded to Mr. J. T. West, for Cactus Dahlia, Charing (pale orange, rich, the clawlike florets tipped with blush, one of the prettiest and most distinct of the tipped Fancy Cactus).

Messrs. W. Cutbush and Sons, Highgate Nurseries, had a bold collection of bunches of Cactus Dahlias and foliage plants.

Messrs. Wells and Co., Limited, Earlswood Nurseries, had a choice collection of early flowering Chrysanthemums.

Messrs. R. Emberson and Son, Fakenham, Norfolk, had a collection of Sweet Peas and other hardy flowers.

The Cactus Dahlia dominated throughout the show, and the best thirty Cactus were shown by Mr. W. Locker, of New Barnet. Mr. G. Stevens, Hornsey, was second. The best twenty-four blooms came from Mr. H. Brown, Luton; Mr. Stilwell, Finchley, was a close second. Mr. A. Brown, Luton, had the best twelve Cactus.

York Dahlia, September 9th.

The first of York Dahlia shows was held on September 9th, in the large hall of the Exhibition building, and was as successful as the promoters could have wished. The Ancient Society of York Florists, in addition to the Chrysanthemum fixture in November, hold what are known as minor shows, and have this year made a new departure in connection with these smaller exhibitions by incorporating with the Dahlia Show the fourth of these minor fixtures; so that, in addition to the Dahlias, there were large numbers of classes devoted to other cut flowers and plants. Classes Nos. 1 to 78 inclusive were open to members of the society only, and the remainder open to all.

OPEN CLASS, DAHLIAS.—In the class for thirty-six blooms of Show and Fancy varieties intermixed, there were five entries, Mr. S. Mortimer, Farnham, Surrey, being placed first with a first-rate stand of bright, even-sized blooms. Messrs. Cray and Son, of Frome, second; and Mr. B. Stringer, Leeds, third. There was a splendid show of Cactus Dahlias, there being six entries for forty-eight blooms, in twenty-four varieties. Premier honours were awarded to Mr. W. Baxter, The Nurseries, Woking; Mr. S. Mortimer second, and Messrs. Clark and Son, Rodley, third. For twelve varieties of pompon Dahlias in bunches of six blooms each, Messrs. Cray and Son were first, Mr. W. Hutchinson, Kirby Moorside, second; and Messrs. Clark and Son third. For single varieties only two entered.

GROUPS.—For a group of miscellaneous plants and cut flowers, Mr. Cottam, of Cottingham, led, and the Rev. G. Yeats, of Heworth Vicarage, came second. For a similar table of Gladioli Messrs. Harkness and Son, of Bedale, had a very fair exhibit, setting up good spikes. Mr. W. Hutchinson was second. Messrs. Harkness and Son were also placed first for a table of herbaceous, or annual flowers, interspersed with summer flowering Chrysanthemums. Messrs. Kelway and Son gave a large silver-gilt medal and 7s. 6d., and a bronze medal and 5s., for the best collection of cut flowers and herbaceous perennials found in their "Manual" of 1903. Mr. Cottam had the best collection, Mr. W. Hutchinson second.

The same exhibitors who won in the open section were again in the running in the members', and the popular varieties were on view.

Amongst non-competitive exhibitors were "Hobbies," Limited, Dereham, with a capital stand (gold medal), Messrs. Isaac House and Son, Westbury-on-Trym, Bristol, had a large collection of herbaceous flowers, for which they received a silver medal. The same award was also given Messrs. R. H. Bath, Limited, Wisbech, for a stand of Cactus and pompon Dahlias and herbaceous flowers. Messrs. James Backhouse and Sons, Limited, decorated the orchestra with Conifers, Palms, and other plants.—J. S. U.

London Dahlia Union, Sept. 16th and 17th.

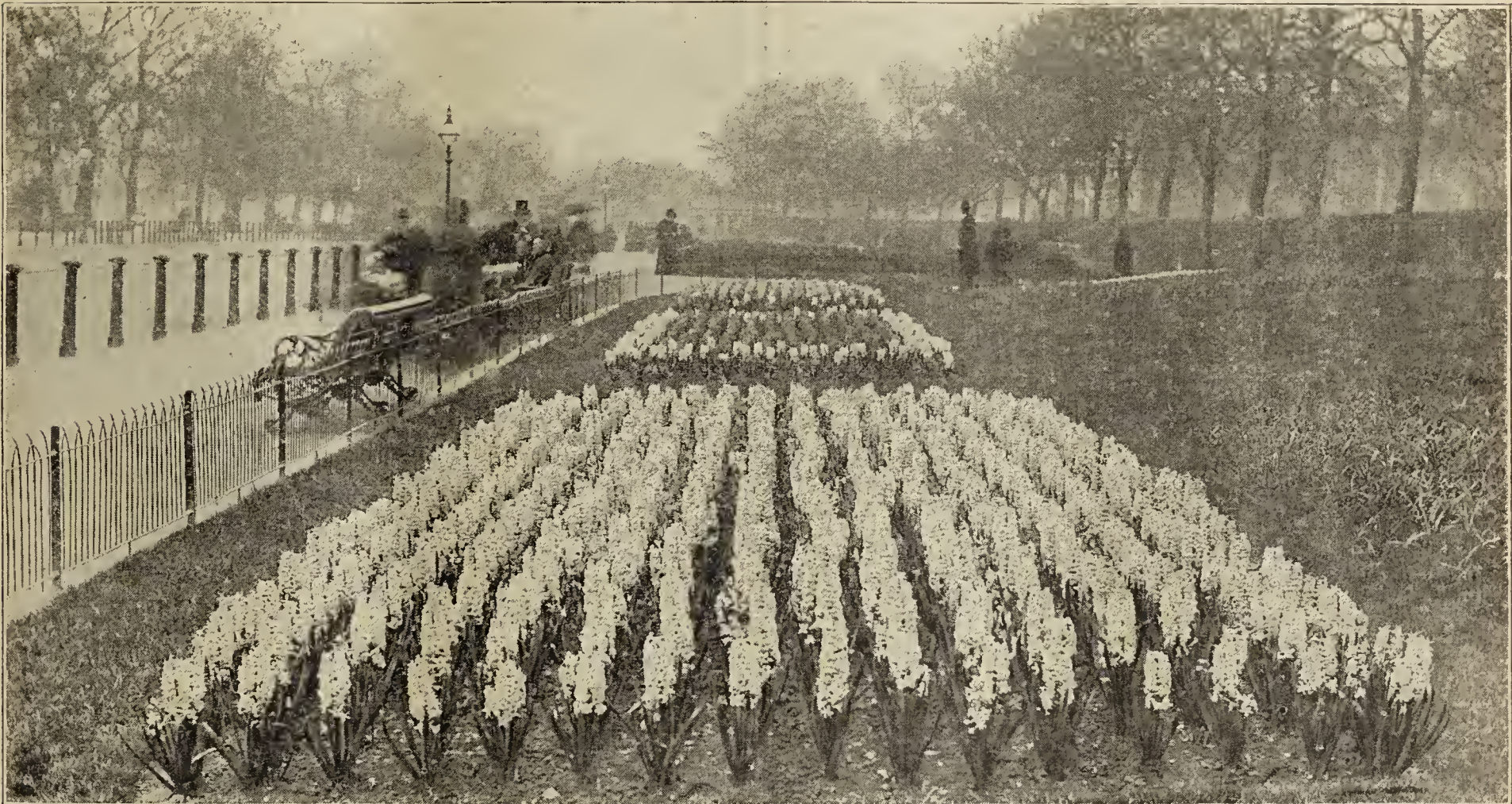
The annual exhibition of Dahlias under the ægis of the Union was held on Wednesday and Thursday of the present week at Earl's Court, London. Mr. R. Dean, as secretary and superintendent, had seen to the proper furnishing of the Prince's Hall with Palms for the tables and green cloth for the walls, and the area was screened off from the public entrance. It was a good show, and competition was brisk.

SPECIAL PRIZES (OPEN CLASSES).—For a display of Dahlias in a space 12ft by 6ft ("Hobbies," Ltd., R. Dean, and W. Stevens giving the prizes), there was only one competitor (Mrs. M. V. Seale, of Sevenoaks), though two had entered. She certainly deserved the prize, even if alone, for the arrangement was a leading feature of the show. *Eulalia gracillima*, golden Elm, Asparagus, and *Berberis Darwini* were used along with the flowers, these being raised on bamboo tubes, 6ft high in the centre.

Three vases of Cactus Dahlias (Wm. Marshall's prizes).—Mr. Stephen Walker, High Street, Thame, with excellently dressed

CACTUS DAHLIAS (OPEN CLASSES).—For twelve varieties in bunches of six (Class 8), the first prize fell to Stredwick and Son, Silverhill Park, St. Leonards-on-Sea, with a set of varieties many of them new. Messrs. Burrell and Co. were second; Mr. Walker, Thame, third; and Cheal and Sons fourth; there being five good exhibits. For twenty-four blooms, distinct, the foremost place was taken by Burrell and Co.; second, J. Stredwick and Son; and Keynes, Williams, and Co., third, out of seven entries. For twelve blooms Mrs. Seale led with sweet flowers, Stredwick and Son second, Keynes, Williams and Co. third, and S. Mortimer fourth.

CLASS 11 (AMATEURS).—The "Hobbies" Challenge Cup, value ten guineas, and 40s., for nine bunches of Cactus blooms in trebles, was won by H. A. Needs, of Horsell, Woking, and Mr. W. Peters came second. Both lots were very moderate in quality. For the six varieties, Mr. M. H. Brown beat Mr. Mawley, and third, Mr. W. C. Pagram. For twelve blooms, Mr. H. A. Needs was first; W. Stephen, Isleworth, second; Mr. H. Brown, third; and Mr. Peters, fourth. Mr. E. West, jun., The Laurels, Hen-



Carter & Co.

Hyacinths in Hyde Park, London. (See page 266.)

vases, beat Burrell and Co., Cambs., and third Keynes, Williams, and Co., Salisbury. Five entered. Mr. Walker had six flowers in each of his vases, and used grasses, Snowberry, purple Prunus, and Golden Honeysuckle.

Six bunches of pompon-Cactus Dahlias.—The pompon-Cactus may be defined as Cactus varieties of a small type, about 4in in diameter. For sprays they are useful. Keynes, Williams, and Co. were first with Dolly, Fairy, and Coronation. Mrs. Seale was second, and Burrell and Co. third.

SHOW AND FANCY DAHLIAS (OPEN).—For twenty-four blooms Mr. Stephen Walker, of Thame, Oxon, led with a fair average set. His finer flowers were Purple Prince, Mrs. Gladstone, Comedian, John Walker, Shottesham Hero, Duchess of York, Matthew Campbell, Florence Tranter, Merlin, Golden Gem, and Maud Fellows. Second out of seven came Mr. C. Turner, and Mr. S. Mortimer third.

For the twelve in this section Messrs. Cheal and Sons were first, Mr. J. R. Tranter second, and F. Taylor and Sons, Chipping Norton, third. The latter had the larger flowers, but the others were of a better colour and greater refinement.

AMATEURS.—Mr. Anstiss, Brill, Thame, beat Mr. W. Peters, Holmchurst, St. Leonards, for the twelve Shows and Fancies in this section. For six blooms Mr. J. West, jun., of The Laurels, Henley, led; second, Mr. J. Findley, of Kingham; and third, Mr. W. Wheeler, Henley; the flowers all being fine.

ley, was followed by Mr. E. Mawley, and third Mr. Pagram, for the half-dozen varieties. H. A. Needs, Esq., was foremost; Mr. Mawley, second; and Mr. Taylor, of Finchley, third, for a vase of twelve blooms, with foliage. In Class 17, for six of a sort, there were seven good entries, the place of honour going to Stephen Walker, with Mrs. Mawley; Keynes, Williams, and Co., second, with a yellow seedling named J. Bryant; and third not discernible. Mrs. Seale was fourth with Mrs. de Luca.

POMPONS (OPEN).—In class 18, for twelve varieties in bunches, the lead was with Charles Turner, having Bacchus, Nellie Broomhead, Queen of Whites, Daisy, Nerissa, San Toy, Darkest of All, Jessica, Hesperia, Wilfred, Minnie, and Silvia. Mr. Walker, Thame, second; third, Burrell and Co.; and fourth, Cheal and Sons; there being seven entries. For the six varieties confined to amateurs, Mr. J. F. Hudson led; Mr. M. H. Brown, Luton, second; and Mr. W. C. Pagram, The Whin, Weybridge, third out of five.

SINGLES (OPEN CLASS).—Messrs. Cheal beat Mrs. M. V. Seale for the dozen sorts, they having Darkness, a new one; also Hilda, Princess of Wales (new), Madge, Naomi Tighe, Miss Morland, Victoria, Serita, Leslie Seale, Vesuvius, Columbine, and Amos Perry. Mr. Walker, of Thame, Oxon, was a good third; and the Rev. S. Spencer Pearce, of Woodstock, Oxon, fourth; five showing. Mr. J. T. Hudson won for the vase of single Dahlias in class 22. Mr. A. Taylor, second; Mr. Ed. Mawley, third; and Mr. W. Peters, third.

The new varieties were being judged when our representative had to leave; but these will be noted in our next.

NON-COMPETITIVE EXHIBITS.—"Hobbies," Ltd. (Mr. John Green), of Dereham, filled half the length of the table on the south wall with Dahlias, all of the Cactus type, with arches of Smilax and bunches of Roses behind them. The other half of the same table was occupied by a gorgeous array of Gladioli spikes from Messrs. Burrell and Co., Cambridge.

On the opposite side of the hall there were collections of Dahlias from Messrs. Dobbie and Co., Rothesay; Cannell and Sons, Swanley; T. S. Ware (1902), Ltd., from Feltham; and Cutbush and Son, of Highgate, London. Mr. Eric F. Such had cut hardy border flowers; and the collection of Apples from Spooner and Sons, Hounslow, was very fine. Mr. J. T. West, of Brentwood, was also forward with a collection of Dahlias (pompons and Cactus), and Mr. Williams staged his Rustic Decorations from Ealing. Flower glasses came from James Green and Nephew, 107, Queen Victoria Street, E.C. Lawes' Garden Manures, in samples, came from 148½, Fenchurch Street, E.C. Messrs. Cheal had Dahlias. Pattison's Lawn Boots were shown.

Moffat, September 11th.

This show, held at Moffat on September 11, in connection with that of the Moffat and Mid-Annandale Agricultural Society, passed off very successfully, although the competition in several of the classes was more limited than it ought to be in such a district. The managers might well consider the policy of throwing all the classes open, especially as some of the prize-takers in the confined classes do not appear to be included in the bounds of Upper Annandale.

The pot plants were well shown, and Mr. Ewan Cameron, Ericstane, won with a nicely arranged table of capital stuff over one of good quality shown by Mr. W. Murray, Ardenholm. Mr. Cameron had also the honour of carrying off the silver medal for the most meritorious plant in the pot plant classes. These were good all through, the leading prizewinners, in addition to Mr. E. Cameron, being Mr. Luke Fraser, Craigielands; Mr. A. Rankin, Vicarlands; Mr. J. Hamilton, Heywood; and Mr. W. Murray, Ardenholm.

Cut flowers were very well grown and set up, and the Asters were much remarked upon for their quality. The leading winners in this section were: Mr. J. McAllister, Drumcrieff; Mr. A. Rankine, Mr. E. Cameron, Mr. J. Raphael, Langshaw; Mr. J. Hamilton, Mr. Fraser, Mr. A. Taylor, Alfred Cottage, Mr. J. Allen, Mr. R. Stoddard, Thankerton; Mr. P. Marshall, Thankerton; Mrs. Farrell, Eaglesfield; Mr. D. Whitelaw, Locharbriggs; Mr. J. Pettigrew, Lanington; Mr. W. Murray, Mr. J. Purves, Marchbankwood; and Mr. J. McGillivray, Craigieburn, the latter carrying off all the firsts for bouquets and sprays.

There was little competition in the fruit classes except for Grapes, where some creditable exhibits were shown, Mr. D. Anderson, Sunnybrae, and Mr. J. Allen, Arundel, Dumfries, winning two firsts each, and Mr. E. Cameron and Mr. L. Fraser one each. The vegetables were not so good as in former years, and many of the prizes fell to winners in the classes already named. The winner for the collection was Mr. J. McAllister, who set up a good variety of well-grown produce. The amateurs showed wonderfully well for the season, though their fruit was also very limited in quantity. The number of prizewinners here is too great for detail in the available space.—S.

Kilmarnock, September 10th.

This old-established show continues to hold its own well as one of the leading provincial horticultural exhibitions in Scotland, and almost 200 additional entries cheered its promoters and gave promise of a good show, a promise which was amply fulfilled when it opened in the Agricultural Hall on September 10. Although the weather has been almost the worst on record for many years, the quality of the produce was, as a rule, splendid, and showed that much cultural skill and great care had been expended on the outdoor flowers and vegetables. The pot plants were exceedingly good and the cut flowers were surprisingly fine, although at this show these are always good.

In the open classes the Dahlias were very fine, Mr. G. Richmond, Mr. J. W. Templeton, Mr. W. Brown, or Mr. G. Richmond leading in all but the singles, where Mr. J. Kerr, Annick Lodge, was first. The best Gladioli came from Mr. Laurie, of Prestwick, that noted district for the Gladiolus. Mr. Begg, Dalry, was first for Pansies, the Violas from Mr. J. Muir being placed first in their class. Mr. J. Haddow led in the three classes for Asters, and Mr. J. Kerr in that for herbaceous. The Roses brought out a good competition, Mr. B. Martindale winning for twelve, and Mr. W. Hill for six. Among other winners in this section were Messrs. J. Tyre, H. McFadzean, D. Burns, G. Lawson, R. Brown, J. Anderson, W. Wilson, and J. Hart. Mr. T. McKelvie, Braehead, led for table plants and Dracænas; Mr. H. Wilson for Fuchsias, greenhouse plants, Ferns, and Begonias, though Mr. A. Millar had the best two Fuchsias. Mr. J. Noble won for foliage

plants, and Mr. R. P. Laurie for Ferns, Mr. R. Brown being first for Chrysanthemums.

Fruit brought out a good competition, Mr. J. Hart leading with Hamburg Grapes and Mr. P. McDonald with "any other" black; Mr. W. White, with white Grapes, and the same exhibitor with the best bunch of Grapes. Mr. D. Murphy had the best collection of Apples and the best twelve dessert and twelve kitchen Apples. Mr. R. Lawrie had the best Pears, and Mr. J. Hart won for the indoor fruit and the collection of hardy fruit. The vegetable classes were well competed for, and the first prize for a collection was won by Mr. T. Anderson; second, Mr. A. Dunlop; third, Mr. T. McKelvie. The amateurs' and working men's sections were well filled and some excellent produce shown.—A. T.

Shropshire Horticultural.

The treasurers of this society (Messrs. William Phillips and James Vine) have had a list drawn up of the total subscriptions and receipts in connection with their shows, for each year since 1875 to 1902. In 1875 the subscriptions amounted to £318 odd, and this, with the gate money at the show, was £791. In 1890, the subscriptions were £428, and the general total for the year £2,963. Last year the society had £433 18s. subscriptions, £428 11s. 4d. from cheap tickets, £1,004 16s. 3d. and £1,918 5s. for the two days' respective takings, £1,216 4s. 10d. as "sundry receipts, including interest"; making a total of £5,001 15s. 5d. for last year alone. The grand total for the 28 years amounts to £79,586 15s. 8d.; and out of this £6,953 0s. 6d. have been donated for various improvements and objects connected with the town of Shrewsbury. Could not the committees of some poor, struggling gardening societies use some of the figures and facts in their letters of appeal to the well-to-do of their localities, and the members of their town Corporations? If outside people could be led to see solid, permanent, material gain in supporting a local organisation whose first object is the exhibition of the best garden produce of the land, doubtless they would more readily assist. But in too many cases the flower show is simply a flower show, and comes once a year. There is such a thing as courting the public aid.

National Statistics.

Last week there was issued by the Government an important return which had been prepared and published on the motion of Mr. Gibson Bowles, M.P. The summary table in this return is as follows:—

	1861.	1881.	1891.	1902.
Population (millions)	28.9	34.9	37.7	41.9
Death-rate per 1000	21.6	18.9	20.2	16.3
Birth-rate	34.6	23.9	31.4	28.6
Paupers, in and out-door (000 omitted)	1054	1110	956	1001
Emigrants, British and Irish ..	65,197	243,002	218,507	211,414
Wheat, average price per qr. (480lb.)	55s 4d	45s 4d	37s 0d	28s 1d
Beef, average per stone (8lb.) ..	4s 2d	4s 10½d	4s 0d	4s 0½d
Foreign grain, &c., imports, Colonial produce excluded (000 omitted)	£32,358	£51,852	£52,003	£52,979
Food imports, total (000 omitted) ..	£83,141	£131,673	£138,177	£224,520
Food imports from Colonies (000 omitted)	£16,655	£30,012	£36,117	£43,516
Food imports, total per head	£3	£5 4s	£5	£5 8s
Exports, total, in millions	£160	£297	£303	£349
Exports, British and Irish	£125	£234	£247	£233
Imports, totals (millions)	£217	£397	£435	£528
Trade, total per head	£13	£19 18s	£19 14s	£20 18s
Income-tax yield per penny (000 omitted)	£11 12	£19 15	£22 38	£25 80 (estimated)
Savings Bank Deposits (000 omitted)	£11,533	£80,835*	£114,484*	£197,105*
British Shipping Tonnage (000 omitted)	4806	6691	8279	10,054
Bankers' Clearing-House returns (in millions)	—	£63.7	£3848	£10,029
Friendly Society Deposits, U.K. (000 omitted)	—	£13 999	£26,663	Not yet known.

* Excluding investments in Government Stock.

PUBLICATIONS RECEIVED.—"The Agricultural Economist," September, 1903. * * "City of Boston, U.S.A.) Department of Parks"; twenty-eighth annual report of the Board of Commissioners for the year ending January 31, 1903. This book of sixty pages is wholly concerned with reporting the progress or alterations in the Boston Parks, with tables of expenditure. A few good half-tone illustrations accompany the letterpress. * * "The British Inventor," No. 5, September, 1903. * * "Agricultural Returns of Great Britain, 1903." This is a copy of the summary tables of the principal crops and live stock in each county of Great Britain in 1903, now in course of distribution to occupiers of land, and will be forwarded to applicants by the Secretary to the Board of Agriculture.



Hardy Fruit Garden.

RIPE FRUIT ON WALL TREES.—Protection in various ways is essential for the well-being of trees carrying ripe fruit. Enemies abound, and will soon destroy, or at least injure and disfigure the choicest specimens. A constant look-out must be kept to thwart the depredations of earwigs, woodlice, and other creeping insects. The earwigs may be trapped in hollow Bean-stalks, folded strips of brown paper, small match-boxes, and similar contrivances, examining them every morning and destroying the pests. Birds are troublesome to Peaches, Nectarines, and Plums as soon as they begin to develop colour and flavour. Protection should be afforded by a covering of small mesh netting. Wasps, though not so numerous this season, may in some places prove annoying. Grapes, Peaches, Nectarines, and Plums may be enclosed in muslin bags to exclude them, also employing a few traps in the form of wide mouthed bottles, three parts filled with sweetened beer and hung about the trees. When sufficiently ripe gather all the fruit. If in perfect condition it will keep some time in a cool fruit room, laying all the soft fruits on a base of wood wool, and covering with tissue paper. Some of the choice late Plums possess good keeping qualities and remain excellent even until they slightly shrivel. Ripe Red Currants on north walls must be netted over as protection, and wet excluded with mats. Choice Apples and Pears must have all the light possible to attain colour, but protected with nets. Gather and store the various varieties as they can be readily detached from the spurs.

WALL TREES CLEARED OF CROPS.—More facilities are offered in the disposing of branches and shoots when the trees have been cleared of fruit. Superfluous branches ought to be removed, and it may happen that a number of the principal ones are too crowded, thus spoiling many others. This, then, is a suitable time to thin out, so disposing them that the main branches of trained trees on walls are not closer together than a foot. The presence of the foliage on the trees is a good guide as to distance. Peaches and Nectarines, which bear principally upon young wood, have no use for the shoots after the crop has been cleared, hence these shoots may be cut out, which will give room for the successional to receive the benefit of abundant light and air. Much benefit accrues from a thorough syringing of those trees which are likely to be infested with red spider or aphids. Water applied with the force of a garden engine dislodges them, and the moisture benefits the roots.

WATERING WALL TREES.—Lack of moisture is a common cause of poor and indifferent crops, and means should be taken to remedy the matter during the autumn and winter, where it is ascertained that the soil about the roots is deficient in moisture. Dust dry soil must be thoroughly soaked with clear water, and after this apply liquid manure copiously. This will add food to the soil, ready to be appropriated by the fibrous roots. Weakly trees will be improved by the treatment, and those partially exhausted by heavy cropping are recuperated to a great extent. The effects of adequate moisture will be in all cases immediate.

PREPARATION OF GROUND FOR PLANTING FRUIT TREES.—This is an important operation, and should not be

delayed until the time for planting arrives. There are many reasons for this, one of the chief being the necessity for freshly disturbed soil to become consolidated to some extent before the trees or bushes are inserted. The question of working in manure depends on the class of fruit to be planted. Apples and Pears and stone fruits require little or no manure adding to the soil. It will cause a strong, sappy, and fruitless growth. Manure when required may be given on the surface. Small bush fruit may, however, have the ground liberally treated with the addition of manure and no unsatisfactory results will follow. The soil should in all cases be made firm. Trench one or two spits deep below the surface spit, being careful not to bring inert, poor subsoil to the surface and bury the comparatively good top soil. The work may be carried out at convenient opportunities during the next few weeks. It will then have become firm enough for planting the trees early in November.

LIFTING YOUNG TREES.—While the leaves still remain on the trees the time is opportune to effect the removal of any that are growing too luxuriantly. Preparations should be made to lift and replant quickly, securing a good ball of roots if possible, but shortening back any strong roots, these rooting deeply being the cause of over-luxuriance. Apricots, Peaches, Nectarines, Plums, Cherries, Apples, and Pears may all be dealt with. Firm the ground about the roots, and use no manure, simply good soil of a loamy character. A good watering afterwards will prove beneficial, and a light mulching of manure of a strawy character. In the case of dry, sunny weather following immediately on transplanting freshen the foliage with the syringe, and this will greatly help the trees to retain their foliage for a longer time, and thus encourage new roots to form.—EAST KENT.

Fruit Forcing.

PEACHES AND NECTARINES: TREES RIPENING THE FRUIT IN JULY.—Whenever there are cases of bad setting and stoning of the fruit, lifting the trees when they give indications of falling is desirable, as they respond to it and root-pruning in a satisfactory manner. If the trees are young, have a tendency to late growth, and do not ripen the wood well, a trench may be made for root-pruning in the manner indicated a fortnight ago. Older trees that make strong wood should have the roots wholly or partially lifted and pruned before the leaves have all fallen. Weakly trees, on the other hand, are greatly benefited by the removal of the old soil from over and amongst the roots. Fresh loam, rather strong, with a sixth of old mortar rubbish and a twentieth of wood ashes, answer in place of the soil removed, following with a good watering of weak liquid manure. Where the soil is calcareous, and wood ashes not available, employ steamed bonemeal and sulphate of potash, three parts of the former and one part of the latter, 80lb of the mixture to each cartload or cubic yard of the loam, incorporating thoroughly before placing in the border. Cleanse all the foliage of red spider and brown aphides by water directed with force from a syringe or garden engine, and repeat occasionally. Brown scale, however, cannot be so dislodged, and the other pests, especially brown aphids, only partially so; therefore, apply an insecticide.

LATE HOUSES.—The grandest Peaches, as regards size, colour, and quality, are such as Gladstone, Sea Eagle, Comet, and Golden Eagle. Thomas Rivers being a very promising variety, large round, freestone, with a bright red cheek, firm, juicy and full-flavoured flesh. All the late Peaches and Nectarines require generous treatment and liberal supplies of water through the growing season, with no lack of nourishment when the fruit is taking the last swelling, then there is no deficiency of juice and flavour. If the trees are pinched in these respects the fruit will



QUEEN.

TYE'S.

OLD SHAPE.

PERFECTION.

QUEEN.

Hyacinth Glasses.

Illustrations from James Veitch & Sons, Ltd., Chelsea.

please the eye, but not satisfy the palate. When the roots find due supplies of liquid the trees and fruit do not suffer, but a rather drier condition of the atmosphere is beneficial when the fruit is ripening. Some soft netting, looped up in small pockets to prevent the fruits bruising each other, is useful to save any fruits falling through ripeness. Thin the shoots, where too crowded. The growths that have borne fruit, not being extensions, should, as soon as the fruit is gathered, be cut out to a successional shoot at the base.—ST. ALBANS.

THE BEE-KEEPER.

Driving Bees.

Autumn is the time when driving becomes general. The usual object of the practice of this art is to obtain the honey without destroying the bees. It is only necessary to drive the bees when they are on fixed combs as in skeps. If they are driven at the close of the honey harvest they may be utilised by forming extra stocks or for uniting and strengthening weak colonies. When it has been ascertained that the bees in the skeps are perfectly healthy, it is better to put them on ready built combs. There is, however, no need to join more than two lots together unless they are weak ones. By the time it is necessary to unite for winter, such a colony will have become fairly strong with five or more bars of bees and brood, and if not sufficiently strong to winter alone, will be a valuable addition to a weak stock.

The secret of success in driving is expressed in Langstroth's principle: "The honey bee when filled with honey never volunteers an attack, but acts solely on the defensive." The middle of a fine day is the best time for the operation, and if the skep is left on the old stand until the evening all the flying bees will be captured without loss. The process is as follows:—Puff a little smoke in at the entrance of the skep which it is intended to operate upon, and wait a few minutes to give the bees time to gorge themselves with honey. Now gently lift the hive off its stand and carry it a few yards away and place an empty skep on the stand from which the colony was taken to catch the bees returning from the fields during the operation, and also to prevent them going into the adjacent hives, causing fighting and robbing.

The hive to be driven must now be placed bottom upwards in a bucket, afterwards placing an empty skep over the full one and attaching them at the junction at the back. The ends of the comb should be nearest the operator, so that the bees can run along them and up into the skeps above. Thus arranged, there should be a good part of the two skeps in contact at the back, over which the bees may have their movements expedited if they are disposed to linger by brushing with a feather, or jarring the hive sufficiently to shake the cluster till it breaks. After smoking and properly subduing, there is no danger of the bees flying during the process.

In driving it is necessary to make the combs vibrate until the bees consider them untenable, and this is done by gently tapping with the hands the lower hive, and in a few minutes the bees will begin to run into the upper darkened hive. As the bees will not remain in the new hive without the queen the driver must keep a sharp look out for the queen as she runs into the top storey. The causes of failure in driving bees are generally cold, the absence of a sufficiency of unsealed food, or paucity of bees.

The cold deters a small population from leaving the brood, and bees will not drive until gorged with food, the absence of which unsealed renders them stupid, and instead of running out they fly, or cling to the combs; and a small population makes it possible for them to find a portion of the hive where the vibration is less as against the sides of the hives. By exciting them or warming them up, they may, after they have been subdued by smoking, in cold weather be driven by sprinkling on the bees and combs a little warm syrup. This they will quickly lick up, and they may be driven as merrily as at midsummer.—E. E., Sandbach.

Trade Catalogues Received.

Geo. Bunyard and Co., Ltd., Royal Nurseries, Maidstone.—*Fruit Trees*.
Clibrans, Altrincham.—*Carnations and Pansies*.
James Cocker and Sons, 130, Union Street, Aberdeen.—*Bulbs*.
Thos. Davies and Co., Wavertree, Liverpool.
J. R. Pearson and Sons, Chilwell Nurseries, Lowdham, Notts.—*Hardy Fruits, Roses*.
Pennell and Sons, Lincoln and Grimsby.—*Bulbs*.
Amos Perry, The Hardy Plant Farm, Winchmore Hill, London, N.—*Part 1, Bulbs and Tubers; Part 2, Border and Rock Plants*.
A. W. P. Pike, Llanishen, Cardiff.—*Carnations and Picotees*.
Wm. Sydenham, Tamworth.—*Pansies, Roses, Chrysanthemums, Carnations, Michaelmas Daisies*.



TO CORRESPONDENTS

* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion.

SPOTTED VINE LEAVES (T. T.).—Too late for an answer this week; see next issue.

FLOWERS IN GREENWICH PARK (W. J. M.).—We will be able to use some of the notes in due course.

GOOSEBERRIES UNHEALTHY (A. J. S.).—We think there must be some other reason for the branches dying. The galvanised netting, we presume, does not touch the bushes, but is elevated over them; and, further, if this netting was the cause of the injury we should scarcely expect the Currants to remain healthy in the same quarter. We know of Gooseberry bushes that have been covered with galvanised wire netting for a number of years, and not the slightest injury has resulted, the netting being fixed 6ft from the ground. The soil is perhaps too hot and dry for Gooseberries, and we should mulch it in summer to retain the moisture.

GRASS SEEDS FOR RENOVATING PERMANENT PASTURE (Robesten Walthen).—The most likely Grasses to succeed where there is great drought in summer and heavy rains in winter are *Festuca duriuscula*, *F. ovina*, *F. rubra*, *Cynosurus cristatus*, *Dactylis glomerata*, *Lolium perenne*, *Poa pratensis*, *Phleum pratense*, *Holcus lanatus*, and *H. mollis*, with the leguminous plants *Medicago lupulina*, *Trifolium filiforme*, and *T. repens*. Of Clovers the last-named is most likely to succeed, and of it we should employ 4lb of seed, and the others in proportion as follows:—*Medicago lupulina*, 4lb; *Festuca rubra*, 2lb; *Cynosurus cristatus*, 2lb; *Dactylis glomerata*, *Holcus lanatus*, *H. mollis*, *Phleum pratense*, and *Poa pratensis* each 1lb; *Lolium perenne* being employed alone with those named at the rate of 4lb per acre, or 21lb altogether if the pasture be very bare. If the situation be high add 2lb of *Festuca duriuscula*, and 1lb of *Festuca ovina*.

ASTER PLANTS DESTROYED IN THE STEM (D. W.).—The small white insect to which you allude as eating off the bark of the stem above the surface of the ground we did not discover, but found the bark present, and on its surface a delicate white mould, and this accorded with that causing sleeping disease in Tomatoes. The disease is known as Aster sickness, and has been attributed to attack by a white worm, termed the Aster worm (*Enchytræus parvulus*), but there are many cases of Aster sickness without the presence of the annelid, while in other instances of collapse the white worm is present in the dead tissues, usually between the bark and the wood, hence accompanies rather than induces the decay of the root stem. We consider the fungus the cause of the disease. It is a *Fusarium*. The fungus attacks the root-stem, or at least enters the plant by the root, young plants suddenly going off here and there, and frequently the plants do not succumb until well advanced for flowering or even coming into bloom. Steps should be directed to destroying the fungus in its saprophytic life by dressing the ground with lime or basic cinder phosphate, and kainit. If the ground be dressed with basic cinder phosphate 1lb to 2lb per square yard, and 6oz to 12oz of kainit per square yard, in the autumn, and the ground well dug and perked over in spring once or twice before planting time arrives, it is seldom that the plants suffer from Aster sickness.

There is a possibility, however, of the plants being infected in the seed pan or pricking out box, to guard against which the soil should be sterilised, heating to 180deg and not over 212deg, or mixing with the compost for sowing seed or pricking off 1lb of a mixture of eight parts basic cinder phosphate and three parts kainit to 28lb of compost some time, say six weeks, in advance of sowing, and turning once or twice before use. Dressing the ground with a mixture of air-slaked lime and soot in equal parts by measure, applying $\frac{1}{2}$ lb of the mixture per square yard and forking in shortly in advance of planting, is also useful, and good against predatory animal and fungoid pests.

The varieties you mention are relatively weaker in constitution than the Victoria and Dwarf varieties, hence more susceptible to contract the disease. It is also supposed that the disease goes over with the seed, but on this point opinions differ, and no satisfactory data is forthcoming.

BOTHY LIFE: GOOD AND BAD FOREMEN (Hopeful).—The whole question was debated at some length only a few months ago in our columns. Our advice is: Do your best in all things; and if you think you have cause for complaint, ask, as a man, to state your case before the gardener-in-chief. Insist upon it, and let him be judge.

THEORETICAL CERTIFICATE OF THE ROYAL HORTICULTURAL SOCIETY (T. T.).—The secretary of the Society (117, Victoria Street, Westminster, S.W.) will send you full particulars if you apply to him. There is an annual examination in April, at which you are free to sit, and you will get specimen copies of the questions put from the secretary, as addressed above. Watch our advertisement columns for tuitioners by correspondence.

BOOK ON TABLE DECORATIONS (X. Y. B.).—Books on this subject are generally only to be had second-hand. We believe there is at least one in preparation for the Press. We have by us several, but the best is one by Mr. William Low, of Euston Gardens, Thetford, who details (and employs wood engravings) his decorations as carried out at Euston for the Duke and Duchess of Grafton. It was published in 1887 by Richard Clay and Sons, London, and is likely enough obtainable.

DRESSING VINE BORDERS (H. C. C.).—As a winter dressing to the border we advise a mixture of two parts dissolved bones, dry and crumbling, and one part double sulphate of potash and magnesia (known to the manure dealer as refined kainit, and having a percentage of 48 to 52 per cent. of sulphate of potash or about 26 to 28 per cent. pure potash, and 25 to 30 per cent. sulphate of magnesia, and containing under 2½ per cent. of chlorine, thus showing that the potash and magnesia are practically all in the form of sulphate). Of this mixture 4oz to 8oz may be applied per square yard, and very lightly pointed in. We have found this mixture have a good effect where Hamburgs do not colour well and are given to shanking.

MUSCAT HAMBURGH GRAPE (Idem).—The Muscat Hamburgs cracking when about half coloured is probably due to excess of moisture at the roots and of consequent excess of nutrition. The only preventive we have found of any real use has been keeping the Vine relatively dry at the roots, even to the extent of causing the foliage to become very slightly limp, but not to the extent of flagging under the influence of powerful sun, mulching the border with short, dry material, and affording a little ventilation constantly so as to prevent the deposition of moisture on the berries, and a free circulation of air on all favourable occasions. In extreme cases, and when the Vines are extra vigorous, cutting the shoots about half through a few joints below the bunch has a good effect, but the chief thing is dry condition of the atmosphere and soil consistent with the health of the Vine and finish of the Grapes. The cutting half through of the shoots should be done as soon as the berries commence changing colour.

DISEASED ROSE LEAVES (S. P.).—The leaves are infected by the Rose rust fungus (*Phragmidium subcorticatum*), which appears in three forms, and all produced on the same host. The æcidia appear in late spring on the leaves and young shoots, forming powdery orange patches, and often cause distortion of the shoots. About midsummer the patches become deeper in colour, owing to the formation of uredospores, and is known as "orange fungus." Finally the teliospores or resting spores are produced as minute black dots on the under surface of the leaves, and is the stage present on your specimens. The appearance of the disease in spring is mainly dependent on the presence of teliospores in the neighbourhood, though sometimes the fungus lives over the winter on affected shoots and produces the uredo stage in spring. It is therefore necessary to collect and burn all fallen leaves in the autumn, though some growers consider burying them deeply in the ground is equally effective. Then, in early spring, before the pruning buds expand, dress the trees thoroughly with a solution of sulphate of copper 2oz, dissolved in three gallons of soft water, applying with a brush or spraying apparatus, coating all the parts with the finest possible film. The spraying is perhaps the best, as the ground is also coated with the solution. If the fungus should afterwards appear spraying with dilute Bordeaux mixture or preferably ammoniacal carbonate of copper solution checks the æcidium and uredo stages, the application being so administered as to wet the under side of the leaves as well as other parts of the bushes.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (C. A. Rocke).—Yes, *Lysimachia vulgaris*, a poor specimen. (Albyn).—1, *Campanula Mariesi*; 2, *Campanula urticifolia* fl.-pl. (Nettle-leaved C.); 3, *Leycesteria formosa*; 4, *Lathyrus megalanicus*, or Lord Anson's Blue Pea. (W. E.).—*Oncidium Forbesi*. (W. D.).—1, *Kalmia angustifolia*; 2, *Daboica polifolia purpurea*; 3, *Vaccinium corymbosa*; 4, *Pieris (Andromeda) floribunda*; 5, *Isoloma* sp., a much-confused genus; 6, a hybrid *Lælia*. (F. J. P.).—1, *Olearia Gunniana*; 2, *Kerria japonica variegata*; 3, unrecognised; 4, *Cytisus Carleri*; 5, *Collutea arborescens*; 6, *Skimmia japonica*.

NAMES OF FRUITS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (F. Norman).—1, *Alfriston*; 2, *Scarlet Golden Pippin*; 3, *Reinette Grise*; 4, *Ribston Pippin*. (Devon).—1, *Warner's King*; 2, *Belle de Pontoise*; 3, *Blenheim Orange*; 4, *Tower of Glamis*; 5, *Bismarek*; 6, *Lord Suffield*.

Covent Garden Market.—September 16th.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush.	5 0	to 8 0	Oranges, case	10 0	to 15 0
" dessert, ½-bush.	5 0	9 0	Pears, Duchess, 48's,		
Bananas	10 0	15 0	per case	8 0	10 0
Grapes, Alicante, lb.	1 0	1 3	" small, ½-sieve	6 0	7 0
" Hamburg	1 0	1 6	Pines, St. Michael's	3 0	5 0
Lemons, Messina, case	10 0	15 0	Plums, Switzens	5 0	6 0

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 0 0	Leeks, bunch	0 2	to 0 2½
" Jerusalem, sieve	1 6	0 0	Lettuce, Cabbage, doz.	1 0	0 0
Batavia, doz.	2 0	0 0	Mushrooms, forced, lb.	0 8	0 9
Beet, red, doz.	0 6	0 0	Mustard & Cress, doz.		
Cabbages, Spring, tally	2 0	0 0	punnets	1 6	0 0
Carrots, bunch	0 2	0 0	Onions, bushel	3 0	0 0
Cauliflowers, doz.	2 0	0 0	Parsley, doz. bnchs.	2 0	0 0
Corn Salad, strike	1 0	1 3	Potatoes, cwt.	5 0	6 0
Cos Lettuce, doz.	1 0	0 0	Radishes, doz.	0 9	1 0
Cucumbers, doz.	2 0	3 0	Scarlet Runners, bush.	4 0	0 0
Endive, doz.	1 6	0 0	Spinach, bush.	2 0	0 0
Herbs, bunch	0 2	0 0	Tomatoes, English, lb.	0 3	0 4
Horseradish, bunch	1 3	1 6	Turnips, bnch.	0 0	0 2

Average Wholesale Prices.—Plants in Pots

Most of the undermentioned plants are sold in 48 and 32-sized pots

	s. d.	s. d.		s. d.	s. d.
Aralias, doz.	5 0	to 12 0	Foliage plants, var, each	1 0	to 5 0
Araucaria, doz.	12 0	30 0	Grevilleas, 48's, doz.	5 0	0 0
Aspidistra, doz.	18 0	36 0	Hydrangeas, pink	12 0	0 0
Crotons, doz.	18 0	30 0	Lycopodiums, doz.	3 0	0 0
Cyperus alternifolius			Marguerite Daisy, doz.	6 0	0 0
doz.	4 0	5 0	Myrtles, doz.	6 0	9 6
Dracæna, var., doz.	12 0	30 0	Palms, in var., doz.	15 0	30 0
" viridis, doz.	9 0	18 0	" specimens	21 0	63 0
Ferns, var., doz.	4 0	18 0	Pandanus Veitchi, 48's,		
" small, 100	10 0	16 0	doz.	24 0	30 0
Ficus elastica, doz.	9 0	12 0	Shrubs, in pots	4 0	6 0

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.
Arums, doz.	2 6	to 3 6	Lily of Valley, 12 bnchs	9 0	to 12 0
Asparagus, Fern, bnch.	1 0	2 0	Marguerites, white,		
Carnations, 12 blooms	1 0	1 6	doz. bnchs.	1 0	2 0
Cattleyas, doz.	10 0	12 0	" yellow, doz. bnchs.	1 0	0 0
Croton foliage, bun.	0 9	1 0	Myrtle, English, bunch	0 6	0 0
Cycas leaves, each	0 9	1 6	Odontoglossums	4 0	0 0
Eucharis, doz.	1 6	0 0	Orange blossom, bunch	2 0	0 0
Gardenias, doz.	1 6	2 0	Roses, Niphetos, white,		
Geranium, scarlet, doz.			doz.	1 0	1 6
bnchs.	3 0	4 0	" pink, doz.	1 0	2 0
Gladiolus, The Bride,			" yellow, doz. (Perles)	1 6	2 0
doz. bun.	3 0	0 0	" Liberty, doz.	2 0	0 0
Ivy leaves, doz. bun.	1 6	0 0	" Generals	1 0	1 6
Lilium Harrisii	2 6	0 0	Smilax, bunch	2 6	3 0
Maidenhair Fern, doz.			Stephanotis, doz.	2 0	2 6
bnchs.	4 0	6 0	Tuberose, gross	3 0	0 0

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1903. September.										
Sunday ... 6	S.W.	deg. 51.7	deg. 50.6	deg. 61.3	deg. 45.2	Ins. 0.02	deg. 62.1	deg. 62.3	deg. 59.7	deg. 39.5
Monday ... 7	S.W.	54.7	52.9	67.3	44.7	—	60.2	61.7	59.7	37.9
Tuesday ... 8	S.W.	61.1	57.3	65.3	52.1	0.11	60.8	61.2	59.7	46.3
Wednesday ... 9	W.N.W.	61.7	56.9	64.9	58.3	—	61.3	61.0	59.6	57.2
Thursday ... 10	W.N.W.	55.5	49.7	53.7	43.3	0.55	59.8	60.9	59.4	37.2
Friday ... 11	W.N.W.	51.9	47.6	61.3	45.7	—	58.0	60.2	59.4	44.5
Saturday 12	W.S.W.	51.7	47.7	57.4	39.6	—	57.0	59.5	59.2	33.3
MEANS ...		55.5	51.8	62.3	47.0	Total. 0.68	59.9	61.0	59.5	42.3

The weather during the greater part of the week was dull and cold, and a heavy fall of rain, accompanied by a rough gale of wind, occurred on the 10th, doing considerable damage to trees, glass, &c.



The Potato Harvest.

Although we are not independent of foreign supplies as regards early Potatoes, we grow the major portion of our winter supplies; and in favourable seasons we grow practically the whole quantity we need. The quality of British Potatoes is also superior to any others. The German and Belgian tubers only compete with our second qualities, whilst almost every year consignments of fine English and Scotch are shipped to America to be sold as luxuries.

The acreage under Potatoes has largely increased during the last twenty years, farmers having perforce been allowed greater freedom of cultivation, and the crop is now without doubt the most valuable and important one we have. It is also of the greatest interest to the working man. The millions in large cities who are always living from day to day without resources, know only too well and quickly when the home Potato crop has met with disaster, and feel acutely the consequent increase of price. The farm labourer benefits greatly through the great demands which it makes on the labour market, and we say without fear of contradiction that the Potato growing districts are the most prosperous in the country. We refer only to rural districts, of course.

The Potato harvest commences generally late in September, but October generally includes the bulk of the work. As soon as the skin of the Potato is quite fast, the sooner lifting takes place the better. If we wait for the whole of the haulm to die off, we may miss excellent spells of fine weather, and it is important that the tubers should be stored dry, especially if they are intended for late keeping. A good supply of dry Wheat straw must be in readiness before work begins, so that there may be no delay in getting the pies covered and made safe.

Small plots of Potatoes are lifted with a fork, and there is no more thorough way, but it is slow and expensive, and quite useless in the case of large areas. The Potato plough is still the general implement. The spinning machine or digger is also common in some parts, but has not made much progress of late. At one time we quite thought that these machines would supersede the plough; but when Potatoes are large these rotatory forks are liable to break and bruise them, and the introduction of Up-to-Date and similar large varieties has tended to the retention of the older fashioned implement. Our own experience of both is in favour of the digger, especially if men cannot be obtained to do the picking up; for after the plough the sides of the furrow must be scratched down, work which children cannot do and women object to. If there is life left in the haulm the Potatoes are disinclined to part from it, and must be shaken off. In such a case very few are left in the ground. Diggers move the whole ridge, and leave all the tubers on, or near, the surface. If they never damaged the sample they would be very valuable.

Any fourth standard child could pick after a digger, but school regulations forbid it. In some parts the school holidays are fixed so as to include October, but the school staff object to have their holiday so late, and they have reason on their side. We suggest that all children over twelve years of age, having put in 350 attendances during the previous school year, should be qualified for a labour certificate for the month of October. Many farmers already are restricted to a small acreage of Potatoes by the scarcity of hands for picking, and until someone invents a machine with hands the difficulty will increase.* Women do not work in fields as they once did, and every man is wanted for other work. Irish labourers at present fill up the gap, but the call for their services is so great that they command their own price. At one time they did the work for 17s. per acre; now they can obtain 24s.

Having got our digger, or plough, and the necessary hands, we shall want baskets to pick into. Oval wicker baskets holding about 21lb are generally used, and they can

be bought for about 1s. each; but we prefer a scuttle-shaped basket, costing about 15s. per dozen. They are made with wire plaited into them, which keeps them stiff, and makes them more durable. They hold about the same quantity as the baskets, but are much easier to empty, which is a great advantage. A man who has emptied scuttles into carts would find emptying baskets much harder work. Each picker will require at least two baskets, and there should be a supply in reserve. Some growers who send away second early Potatoes in five-peck hampers, having a handy supply of the latter, use them for gathering the main crops. Each picker has a hamper set down conveniently near, into which he empties his basket when full. Two men come round with a cart, into which they empty the hampers. This system is only suitable where the plough goes round in the same way as a digger, and only two rows are open at once. Where Irishmen are employed a number of alternate ridges are opened, and the men work in line, each in his own row, with a cart following behind. The drawback to this system lies in the danger that a sudden downpour of rain may find a large quantity of Potatoes exposed.

Potato "pies," or "clamps," vary in width from 6ft to 9ft. Seven feet 6in to 8ft we think wide enough. If there is much disease, do not exceed 7ft. To make a good job, prepare long batts of Wheat straw about 6in or 7in thick, and tied tightly with straw bands at every foot or 14in. Lay two of these down lengthwise, 7ft apart, and shoot the Potatoes between them. These batts may be continued for any length, and the pie kept the right width without trouble. The batts keep the Potatoes from slipping out at the foot, and make it much easier to get the ridge well up. This is desirable, for the sharper the pitch, the less likely will it be for wet to penetrate the straw.

The batts are a great safeguard against frost, for the portion of the pie near the ground is specially liable to be penetrated. It is along the foot that an extra thickness of straw is required, and the batts ensure this. The Wheat straw must be put on as straight and as much like thatch as possible, on each side, covering the batts well; then a light covering of soil, say 3in to within 12in of the ridge. Then a capping of straw over the ridge, the ends being fastened with soil. After any resulting sweat is over, another 4in of soil over all will complete the work.

Work on the Home Farm.

The weather being still very unsettled, harvest progresses slowly. Very little corn is uncut and a fair quantity of Wheat is in stack, but all the Oats and the greater part of the Barley are still out. We have heard the threshing machine to-day for the first time this season, but have not a report of the yield. We note that new Wheat is not meeting a ready sale, at least according to market reports. This is probably owing to poor condition, for very little can have been got really dry enough for immediate threshing. If farmers can hold off until their Wheat is fit to thresh there should be a good market for it. With a drop in the acreage of 144,000 acres, English Wheat must be scarce.

A neighbouring farmer has got all in except twelve acres, and is thin-furrowing stubbles. He is to be envied and copied, for he is a very early sower, and it is a case of early sow, early mow. These are the men who make farming successful. He prefers ploughs to cultivators for breaking up stubbles, but his land is on the heavy side, and wonderfully clean. He offered his labourers £1 for each barrowload of twitch they could find on his land the other day, but none have started collecting it.

Potatoes are dying off quickly. The spot on the leaf is spreading rapidly, and in some fields the leaf is nearly all gone. All kinds are affected, and without a spell of fine weather disease must make a serious attack upon them. The Potatoes will certainly be ready for lifting before the end of the month.

There is plenty of work before us at present. Many annual weeds have shown themselves amongst the Swedes and late Turnips, and they will all have to be looked over, so there will not be much time for hedge trimming, which is often done in September, or for autumn fallowing, even if the weather should be suitable for it. Rye for green spring food and tares for early summer use will soon require sowing, but the land must first be ploughed, and for tares will want manuring first. It is good land which will grow tares without manure. On clean stubble a good stirring with the cultivator might make a fair seed-bed for Rye, but it is slipshod farming, and the real saving a doubtful one.

Sheep will shortly be very dear. Lambs are doing better generally, and here are above the average. Dairy cows are scarce and dear, but other cattle, both fat and store, are cheaper.

* In a part of Dumfries-shire, last year, a school was closed specially that the children might be free to assist at the Potato harvest.—ED.

Barter's WILD GARDEN BULBS.

OUR SELECTION OF
DWARF - GROWING INDIGENOUS
AND OTHER BULBS,

Adapted for Rockeries, Sloping Banks,
Odd Corners, and Naturalization.

CONTAINS

1,100 Fine Bulbs. Price 21/- nett.

Seut Packing and Carriage Free on receipt of remittance.

100 Aconites	100 Blue Grape Hyacinths
100 Blue Bells	50 White Grape Hyacinths
50 White Bells	50 Feather Hyacinths
100 Star of Bethlehem	50 Chionodoxas
100 Fritillarias, mixed	50 Allium Moly
100 Snowdrops	50 Dogtooth Violets
100 Triteleias	25 Anemone Fulgens
50 Snowflakes	25 Anemone Apennina

Half the quantity, price 11/6. Packing and carriage free.

Carters Wonder Box of Bulbs, containing
1,000 Hyacinths, Tulips, Narcissus, &c., price 21/-
Complete List of Contents on application.

"HOW TO GROW BULBS AND TUBEROUS PLANTS,"
Price 7d., post free.

JAMES CARTER & CO.,

Seedsman to His Majesty the King,

237, 238 & 97, HIGH HOLBORN, LONDON

EVERGREENS.

A very large and thoroughly trans-
planted stock.

CATALOGUES POST FREE.

DICKSONS Nurseries, CHESTER

Price 2/6; Post Free 2/7½.

THE PINE APPLE MANUAL

By Contributors to the "Journal of Horticulture."

ILLUSTRATED WITH ENGRAVINGS.

Being a Guide to the Successful Cultivation of that Fruit,
and to the Construction and Management of the Pinery.

Office: 12, MITRE COURT CHAMBERS, FLEET STREET, E.C.

1500,000 BULBS.

Spanish Iris, Yellow, White, and Blue	7/6 per 1000.
Crocus, all colors	5/- per 1000.
Sir Watkin Narcissus	5/- per 100.
Horsefieldii	5/- per 100.
Trumpet Narcissus	7/6 per 1000.
Glory of Leiden Narcissus	6d. each.
Madam de Graaff	3/- each.
Sweet Scented Pheasant Eye	
Narcissus	5/- & 7/6 per 1000.
Mixed Narcissus	5/- per 1000.
Double Daffodils	5/- & 10/- per 1000.
Tulips, Mixed (choice)	2/- per 100.
Single Lent Lilies	3/6 per 1000.
Snowdrops	5/- & 7/6 per 1000.
Strawberry Plants	1/- per 100.

SEND FOR LISTS BEFORE
ORDERING ELSEWHERE.

Cross & Son, Daffodil Nurseries, Wisbech.

PLANTING SEASON



PAULS' ROYAL NURSERIES

WALTHAM CROSS, HERTS.

12 miles from London. South Entrance four minutes' walk from Waltham Cross Station; West Entrance three minutes' walk from Theobald's Grove; both Stations on the Great Eastern Railway.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Gold Medals in 1903 from Royal Horticultural and Royal Botanic Societies.

FRUIT TREES for the Orchard, Garden, and Forcing House. Hogg Memorial Medal, 1901.

HARDY TREES for Streets, Parks, and General Planting. Silver Medal from Royal Agricultural Society of England.

SHRUBS, both Evergreen and Deciduous.

CLIMBING PLANTS, Hardy and Greenhouse.

RHODODENDRONS, CAMELLIAS, & AZALEAS.

HERBACEOUS PLANTS in great variety.

BULBS and SEEDS, and all Garden Sundries.

PRICE LISTS ON APPLICATION. INSPECTION INVITED.
Upwards of 1000 Medals, Prizes, and other Awards at leading Exhibitions during the past 42 years.

SOLE POSTAL ADDRESS—

WM. PAUL & SON,

WALTHAM CROSS, HERTS.

Rose Growers by Appointment to His Majesty the King.

CLIBRANS

DOUBLE PRIMULAS.

EXCELLENT for cutting or as Pot Plants. We offer the following choice varieties, strong healthy plants, in 3in. pots, at reduced prices.

	Each.	doz.
Alba Plena, pure white	9d.	8/-
Annie Hillier, light pink	2/-	20/-
Candidissima, the best white	1/-	10/-
Earl of Beaconsfield, rosy carmine	1/6	15/-
Marchioness of Exeter, white speckled pink	2/-	20/-
Stewartii, double red, fine	1/6	15/-

CINERARIAS

from stores, 1/6 doz.; in 3in. pots, 3/6 doz.

CYCLAMEN

in 5in. pots, set with buds, 12/- and 18/- doz.

PRIMULA SINENSIS

to colour, or mixed in 3in. pots, 2/6 doz.

All above prices are special to this Advt.

ALTRINCHAM & MANCHESTER

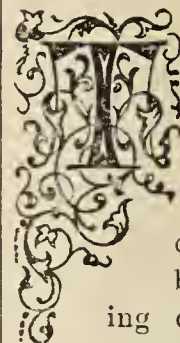
PURE WOOD CHARCOAL, Specially Prepared for Horticultural use. Extract from the *Journal of Horticulture*: "Charcoal is invaluable as a manurial agent; each little piece is a pantry full of the good things of this life. There is no cultivated plant which is not benefited by having Charcoal applied to the soil in which it is rooted." Apply for Pamphlet and prices to the Manufacturers—**HIRST, BROOKE & HIRST, Ltd., Leeds.**



Journal of Horticulture.

THURSDAY, SEPTEMBER 24, 1903.

Root Pruning.



THE question is often asked, Is it really necessary to prune the roots of fruit trees? The answer must be in the affirmative. In many cases it is the only thing that can be done to bring some trees into a fruit bearing condition. There are gardeners who maintain that it is unnecessary, and say, "Crop a tree well, then root-pruning will not be needed." But what about trees that will not bear fruit?

The most favourable time for this operation is during the months of October and November; the earlier it can be safely performed the better it is for the trees. Some four years since I root-pruned three Pear trees in the month of January, but two of them had hard work to recover. When a root is pruned in a proper manner, a callus is formed on the face of the wound, and from this the roots are emitted. When the pruning is done early, the soil will be in a warm state, and new fibrous roots will be made before winter.

It may be asked, How shall we know when root-pruning is required? I say by the condition of your trees. All fruit trees must make a certain amount of growth to keep them in a healthy state, and for the bringing to perfection a crop of fruit. But it sometimes happens that some trees, especially young ones, will have a tendency to make too much growth, at the expense of bearing fruit. This is especially noticeable when much manure is used, or if planted in rich soil. If the annual growths much exceed 12in in length, and very little or no fruit is produced, it will then be necessary to root prune to bring the tree to a bearing condition. Root pruning checks overgrowth, equalises the balance of strength between root and branches, and hastens and heightens the fruitfulness of trees. Fruit

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

trees that are allowed to grow more or less as they like, as in the case of standards, will not require root-pruning; but with trees that are restricted in size, as wall trees, pyramids, open bushes, and other forms, it will often be found necessary.

Varieties of Apples that are naturally free fruiting, such as Lane's Prince Albert, New Hawthornden, Lord Grosvenor, Devonshire Quarrenden, and others, will scarcely ever require root-pruning. Stone fruit, as a rule, require more attention to this matter than do Pears or Apples, Apples, perhaps, the least of all. Some are under the impression that root-pruning takes up so much time, and hint that they have quite enough to get the top pruned. This is false economy, for when a tree is properly root-pruned it will greatly lessen the need for branch pruning; not for one year only, but for several. One is sometimes asked what to do with old trees on walls that have not fruited for years. These may be improved in some cases, but unless it is the wish of the owner to have the trees preserved, which is sometimes the case, the better plan would be to take them out and replant young trees in their place. It can scarcely be expected that old and exhausted trees can be brought into a very satisfactory fruiting condition. Then there is the risk as to whether they may be good varieties.

When root-pruning, a trench must first be taken out at a given distance from the stem of the tree. This will depend upon the age and size of the specimen dealt with. A tree three or four years planted about 2ft or a little more will be all that is required. But 3ft or 4ft should be allowed for larger trees. It is always best to have plenty of room, because one can always work as near to the stem of the tree as may be required and considered safe. Indeed, with some young trees it is even a better plan to carefully lift and replant. With pyramids or bushes half of the tree may be done one year, and the other half subsequently. The trench must be taken out wide enough for a man to comfortably work in, and deep enough to get as low as the roots are likely to go. All the soil should be taken out, leaving the trench quite clear. A fork is often recommended for removing the soil from the roots, but many of them will be broken. I find it much better to have a light one-sided pick, with a handle about 3ft long; this can be more conveniently worked, not being so clumsy as a fork.

The soil must be carefully picked out from between the roots down into the trench, and thrown out from time to time, so that a clear working space may be kept. All roots of a fibrous nature should be preserved; they may be turned back toward the stem of the tree, and kept in position by a lump or two of soil. Sometimes they may be loosely tied to some of the strong roots. When young trees are operated on the soil may be removed fairly close up to the stem. An important point to bear in mind is that there are no roots left that are pushing straight down. This is rather a difficult matter with some kinds of trees. The thick roots should be cut well back to different lengths, a sharp knife being best for this purpose. It is best to cut in an upward direction, so that the new roots may ramify in a horizontal direction.

In returning the soil it should be made firm, and the roots carefully spread out at different levels as the work proceeds. It is a good plan to add some burnt soil, wood ashes, and bonemeal to the staple soil, which will greatly assist the trees. With Plums, indeed all stone fruit, and especially in non-calcareous soils, old lime or mortar rubbish should be used, and the whole made very firm. It may seem to some rather a long process, but a couple of men used to the work will get a number of trees done during the day.—J. S. U.

Autumn Thoughts.

Can one realise that, to all intents and purposes, the active part of the year is over, and that the great scene shifter is now ringing up the curtain for "The passing smiles of autumn"? Yet it is so, and over the gardening world steals a feeling, not of rest, but of restfulness; and not of satisfaction, yet one of anticipation for better things to come, for at the dying embers of disappointment the torch of hope is rekindled to guide on into the unknown—the unfathomable future. As autumn passes with all the pomp and pageantry of an almost unearthly beauty in its train, gardeners, of all men, surely, who live so much in com-

munion with Nature, can feel some sympathy in the hard hand of the great, yet capricious, mistress to whom they minister ere the icy grip of winter enforces rugged realities, and incites to more prosaic work.

There is no lack of work now; may be said. That is so. And there is but small comfort in contemplating the effects of the passing year. That may be so. Yet who can look upon their immediate surroundings without feeling a stimulating hopefulness that the comparative barrenness of the year is again pregnant with possibilities for another season; or fail to feel that power which lies in the ministering hand to promote that desired result? Nature is always busy in some shape or form, and has many little surprises in store.

In our own immediate sphere of work we are to some extent prepared to meet the latter, or should be; and it is generally admitted that much of the erratic activity she displays is amenable to control if a prescient knowledge of what should be done and the energy to do it obtains. There is, truly, but little pleasure in looking back now; there is some pleasure in looking forward at this particular season; and, probably, in gardening, as in most other phases of life, most of our pleasures and the keenest of them are anticipatory.

In speaking of autumn as a period of restfulness the term is comparative only. The hurry and rush of the year has gone, but much remains to be done, and the vital necessity of doing it without delay cannot be too strongly impressed. Nature is quieter, certainly, and there is a spirit of quietness prevailing over this early period of the passing year which penetrates the soul of the worker, bringing him so closely in touch with it as to make this autumn work very enjoyable. Never was outside growth more active than in this year, nor was there ever greater evidence of misdirected natural force than is now to be seen. The less fruit the more woody growth, and in some old-world gardens the season has been conducive to a mild luxuriance, which bodes ill for future prospects unless vigorous measures are promptly taken to admit all possible air and light ere it is too late to derive their full benefit. It is not only in the customary "breast" pruning of wall trees and normal thinning of bushes that claims attention, but after an extraordinary season measures should be employed judiciously to gain the end in view.

In the glass department much may now be done to promote those happy conditions conducive to rest during the dull, short days of winter. A general overhauling of stove and greenhouse plants, and a general cleaning of both plants and pots, and rearrangement of the permanent occupants with all the additional room that can be given to them by the removal of *Caladiums* and similar things to winter quarters in the background, may at once be done; anything, in fact, to avoid even a suspicion of overcrowding, if that is possible, will well repay the labour or even sacrifice that common sense prompts. Possible?

Of course some will say such preaching is vain, and that their houses get more blocked at this time than any other. That is so. Yet it is not rarely the case that a lot of useless stuff is held over to be eventually thrown out, and the grower may well take second thought now over the matter than defer it until spring. Fire heat, not higher temperatures; ventilation, not draughts; and the removal of temporary or discontinuance of permanent shading, are small things which mean much now and more hereafter.

As with the plant houses so with the fruit houses. There are many examples of the evils of overcrowding amongst Vines and Peaches, particularly amongst the latter; and where the removal of canes (thinning out) or spurs in the vineries has been determined upon, their prompt excision whilst atmospheric conditions still keep foliage and roots active is obviously worth more than a passing thought. Why so many lay in and tie down such an abundance of superfluous growth the Peach is capable of making in a season it is not easy to understand, the more so as the custom, which it appears to be, is useless labour—nay, worse than useless. However, that mistaken policy leads further back than these remarks are intended to do. The bulk of bearing wood can now be removed with distinct advantage to the current year's growth. It is now the time when next year's bearing wood fairly revels in autumn sunshine, if it can get it, and future prospects lie in this maturation if prevailing conditions allow it to obtain.

Outside, our theme might be prolonged and extended indefinitely, for it is not alone applicable to the fruit bearers first mentioned, but the ethics of free trade in light, air, and such sunshine as may be vouchsafed to us in declining days includes nearly, if not all that we wish to pass, not only comfortably through the possible ordeals a winter may bring, but with stored up energy enjoy that rest which means renewed vitality and productiveness in its turn. It is an old, old story, oft repeated, always wanted, and worthier of being more deeply graven on the mental tablets of this gardening generation than lies within the pen power of—A. N. OLDHEAD.

KYLEMORE CASTLE.—The Duke of Manchester has purchased Kylemore Castle and the estate of 13,000 acres for £63,000. The estate is in the heart of Connemara, and the castle has several times been assigned by rumour as a probable Royal residence.

**Cattleya x Pittiana, Wilson-Potter's variety.**

The flower received a first-class certificate on September 1. Our figure on this page is a very true likeness of the flower, with its wavy petals of a tawny brown colour, and reddish flush. The lip broadens in front, and is rich mauve-purple.

Dendrobium Phalaenopsis.

This magnificent Orchid is now about to flower on this season's growths. Everything should be done to get them developed. Water must be given till after flowering, and no shading is necessary.

The Week's Cultural Notes.

A constant supply of fresh air is one of the most necessary details in Orchid culture just between the seasons, as at present it is apt to be neglected. Thinking to economise fire, perhaps the ventilators at the bottom of the house will be closed and kept closed during the night, but this is not economy by any means. Beside robbing the plants of the necessary air, it causes the moisture to condense on the glass and from there to fall upon the plants, cold chilling drip that does more harm in an hour than can be put right in a year. Many fine specimens of Phalaenopsis and Angraecum have been lost owing to this icy cold moisture falling into the centre of growth.

During the summer and well into the autumn a little air should be put on top and bottom a couple of hours after closing time, a nice fresh feeling in the morning resulting from this. Even in winter a chink of air below at least should be allowed even in the warm houses, while in the intermediate and cool structure a little top air must be allowed except in the very coldest nights, always providing, of course, that the heating apparatus is capable of keeping the correct temperature without overheating the pipes. This is important, hot pipes causing a dry atmosphere and very unpleasant smell injurious to the plants.

In the cool house the plants will be taking on that rusty appearance that only comes from cool airy conditions, and it is a pleasure to work among them. Foliage that is hard and rustling, instead of flabby and pale green, is a sure sign of health and a forerunner of plentiful flowering. Just as the plants have been repotted or surfaced, a slightly closer atmosphere may be given for a few days to re-establish them, but when this has not been done the autumn air, laden with moisture as it often is at night, must be fully and freely admitted. As long as the temperature ranges somewhere between 55deg. and 60deg. as a minimum none of the Odontoglossums, cool Oneidiums, Disas, Lyeastes, and the general run of alpine Orchids will take any harm.

September is getting well on, and towards its end frosts are sure to occur, consequently all Orchids outside must be placed under cover, the semi-hardy kinds, such as Bletia hyacinthina, being left until last. The deciduous Dendrobiums may still be left in a sunny frame. They are hardier than generally supposed, and rest more surely and flower more freely from having a good airing now. The evergreen kinds are better in the house, but these, again, must be cool and fairly dry, though not sufficiently so at the roots to cause the pseudo-bulbs to shrivel.—H. R. R.

Cyclamen Culture.

Cyclamens are now cultivated more extensively than ever. Flowering as they do throughout the winter, they help to fill the gap between the last of the Chrysanthemums and the first of the bulbs. The old method of growing Cyclamens was to grow the eorms year after year. When the plants had finished flowering they were dried off, and after being rested for a time were shaken out, repotted, and started again. This method is still in vogue, although not on such a large scale as previously.

The system generally adopted now is to grow the plants without a check from the seedling to the flowering stage each year. Sow the seed at the latter end of August in well-drained pans. Good drainage is an essential factor from start to finish for the successful cultivation of Cyclamens. The seed should be sown thinly and evenly over the surface of the soil, pressed in, and covered lightly with fine soil. Cover the pans over with glass, and place in a cool frame to germinate. Remove the glass covering as soon as the seedlings appear above the soil, and raise the pans up to the glass to prevent them from getting drawn. So soon as the plants can be handled prick them off into other pans filled with a similar compost, and keep the plants growing in a night temperature of 50deg., rising to 60deg. in the day until the new year.

In January pot them off singly into 2in. and 3in. pots, according to the size of the plants. For potting use two parts loam and one of leaf soil, adding sufficient charcoal and broken lime scraps to make the soil porous. The lime scraps are used instead of sand. Cyclamens root with exceptional freedom where they are employed. As the roots of the Cyclamens emanate from the base of the eorms only, a good half of the latter should be above the soil when the potting is finished. A great mistake is made in completely, or nearly so, covering the eorms with soil, as, apart from causing them to rot, it encourages a disease which sometimes attacks the plants, and failure is the result.

At this stage, in particular, care must be taken not to allow the soil to become dry, for if that occurs the bulb will become hard, and it will be some time ere it commences to grow again. Maintain a moist atmosphere in the house or frame wherein the plants are growing, and syringe them lightly during bright weather. By the middle of April the plants will require a shift into large 60-size pots. The weather by this time should be favourable enough to admit of the plants being put out into cold frames, which should be filled up with ashes, so that when the plants are placed on them they will be quite near to the glass. Keep the frame closed for a few days, and then air may be admitted when required, and shade lightly from bright sunshine.

Towards the end of June the plants will have filled the pots with roots, and will require potting into 48's

and 32's, in which they will flower. Use the same compost for potting, and pot firmly. Keep them close for a day or two after potting, and then gradually increase the amount of air. Syringe the plants morning and afternoon during bright weather. From July to September remove the lights at night time when the weather is favourable.

Cyclamen are very apt to throw up adventitious flower buds, and these must be pulled out as they appear. Turn the plants round occasionally to promote an even balance of growth on all sides, and where a large number of plants are grown it is advisable to divide them into batches; the first coming in the middle of October, the others being brought on as required. Afford the plants weak manure water as soon as they show the flower buds on the crown of the bulb.—G. R., Waddesdon.

**Cattleya x Pittiana, Wilson-Potter's var.**



A New Eremurus.

Under the name of *Eremurus Himrob*, M. Van Tubergen, horticulteur à Haarlem, has put into commerce a new variety of this Liliacée, the issue of *E. Himalaicus* x *E. robustus*, hence the compound name Him. rob! The foliage is that of *Himalaicus*, and hardier than *robustus*, the flowers resembling *Elwesianus*, but are clearer.

Commercial Culture of Hyacinths.

We have the privilege to reproduce an illustration of one of Messrs. Toogood and Son's Hyacinth fields, as grown for them in Holland. The photograph (page 286) speaks for itself; the irrigation channel down the centre is sometimes necessary in such dry porous soils. The bulbs, of course, are grown in beds, each bed containing many thousands of bulbs, and all of one variety.

The Water Hyacinth in American Rivers.

A successful method for destroying the Water Hyacinth (*Echornea*) which seriously obstructs navigation in southern rivers of North America, has been tried on the St. John's, where some wharves have been abandoned because of it, according to the Boston "Transcript." A boat filled with a laboratory and force-pump sprays a swath 90ft wide with a chemical which causes them to die at the roots.

A "Friendship Garden."

Sir William Harcourt is an enthusiastic gardener. At Malwood, says a contemporary, where his estate comprises only twenty-five acres, he has devoted four to his garden—a beautiful and carefully-kept retreat, across the green swards of which peacocks strut proudly, as though conscious of the Royal descent of their owner. A feature of the retreat is the "Friendship Garden," in which trees planted by old friends are growing. The garden was commenced in 1890, when the first Oak was planted by Mr. Gladstone and the first Elm by Mrs. Gladstone.

Allium Neapolitanum.

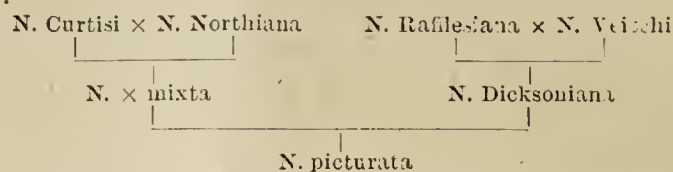
There are a number of species of *Allium*, but the most useful for greenhouse cultivation is *Allium neapolitanum*. The flowers, which are borne in heads or umbels, are of the purest white. The bulbs are easily forced, so that they can be had in bloom early, and at a time when white flowers are sought after for various purposes. Place the bulbs in 4½ in or 5 in pots, 1½ in apart, and 2 in deep, in a sandy mixture of loam, leaf soil, and sand. Plunge the pots under ashes until growth begins, after which place in a cool greenhouse, and allow them to come gradually into bloom.—E.

Beautiful Asters.

On September 15, Mr. Amos Perry, of the Hardy Plant Farm, Winchmore Hill, London, N., sent us bunches of perennial Asters, and his splendid form of *Geum Heldreichi*, that seems to improve on acquaintance. The following letter accompanies the flowers: "I herewith send you a few flowers of my new *Geum Heldreichi* superba. This is without a doubt one of the best new hardy plants introduced during the last two or three years. It is now in full flower with me, and will remain so until the frost sets in. It has been flowering since the first week in May, and is of a pretty, neat habit, with flower stems well thrown up above the foliage, and lasts some time cut. Its delightful colour will make it a very popular plant. Aster, Perry's White, is without a question the finest white Aster up to date. It is quite distinct, with its pretty loose petals reminding one of a Japanese *Chrysanthemum*. It is of a pretty, neat erect habit. Aster Elsie Perry is the best pink variety introduced up to the present. It is a seedling I raised here some three or four years ago, and which received an Award of Merit at the R.H.S. last year. The flower is a clear rosy pink. I also enclose a few flowers of my new double pink Aster. I have several very promising double ones which I hope to show before the R.H.S." [The flowers are in each case all that is claimed for them.—ED.]

Nepenthes x picturata.

The following shows the genealogy of a beautiful and handsome new Pitcher plant possessed by Messrs. J. Veitch and Sons, Ltd., Chelsea.



The New Iceland Poppies.

In August, Messrs. Storrie and Storrie, of Dundee, sent the following letter with a delightful bunch of pale pink, rose, carmine and tea-coloured Iceland Poppies: "We send you herewith a few blooms of our new strain of Iceland Poppies, which was certificated by the R.H.S. in June last. We hope to send you a larger bunch later on, when the possibilities of seed production are spent; but, meantime, we think you will admire the delicate shades and harmonies of these new colours."

A New Disease of Turnips.

A new disease of Turnips was discovered in Lincolnshire in the early part of this year. It is caused by a fungus of the genus *Phoma*, which is not yet defined, but which is very infectious and closely allied to that which has caused great destruction to Mangolds. Although it does not appear (says the "Nottingham Guardian") to have been seen as yet anywhere except in Lincolnshire, it is very desirable that vigorous steps should be taken to prevent its spreading, and, therefore, the Royal Agricultural Society has done useful service by issuing a little leaflet, by its consulting botanist, Mr. William Carruthers, F.R.S., in which some very practical advice on the subject is given to growers. Farmers are warned to be on the watch against the disease during the present Turnip season. It appears that no possible treatment can get rid of the fungus when it has once got possession of the roots of the Turnip or Mangold. The only thing to be done is to prevent the spread of the disease by removing the affected roots from the field before the ripe spores escape into the air. On the assumption that the fungus reaches the Turnip through the leaves, the foliage should be sprayed in the autumn with dissolved sulphate of copper, or, better still, with a Bordeaux mixture, made up of 12lb of sulphate of copper, 9lb of quicklime, and 100 gallons of water. This is an operation that should be performed at once.

Our Fruit Supplies.

If the season had been at all favourable the wholesale salesmen in the Birmingham market would have been receiving daily at the present time at least a thousand pots each containing 72lb of English Plums, whereas recently there was scarcely an English Plum on the market. The Dutch and German Plums are brought across the water to Hull, from which port they are consigned to all the great distributing centres. Birmingham get its full share, and the Plums of the best quality were selling at 3s. to 3s. 6d. a sieve of 24lb, while the inferior sorts were disposed of at from 2s. down to 9d. a sieve. Of late, the Apples from Italy and Spain have been in demand in the absence of English but on the 20th there were far more home-grown Apples in the market than a month ago, with the result that the demand for the foreign fruit was considerably curtailed. The price for English Apples was 6s. to 12s. per pot of 64lb, according to quality. The Italian Apples arrive in chips containing 18lb, and they were sold at from 2s. 3d. to 2s. 9d. per chip, a marked reduction on the 5s. a chip, which was readily given a few weeks back. The Spanish Apples are selling at 8s. to 11s. per case of 84lb, whereas a month ago the price was nearly double. The season for American Apples is commencing, and the consignments already received are in capital condition. It is expected that the Apple crop in Canada will be plentiful, and that the supplies in the English markets will last well into the new year, when the Australian season will begin. A few English Melons were on sale at from 1s. 3d. to 2s. 6d. each, but the greatest supply was from Valencia. The Spanish Melons were sold at from 6s. 6d. to 8s. per case, each containing twenty-four or thirty-six; but the best class of Valencias sold freely at 9s. to 10s. 6d. per case. These Valencia Melons are of very fine quality. Each Melon is wrapped in tinted paper.

Some Typical Gardens.

VIII.—The Blind Man's Allotment.

Imagine, if you can, a piece of ground, rectangular in shape, about twenty square rods in extent, surrounded by wire netting, and differing only in the way in which it is cropped from a number of others in the same field, and you have the example that I have selected for the purpose of bringing this series of sketches to a conclusion. As I have stated in the headline, it is not only an allotment, but a blind man's allotment, and is cultivated by an individual to whom day is the same as night, as a hard fate robbed him many years ago of one of the greatest of earthly blessings—eyesight. Naturally, then, I shall be forgiven if I wander a little from my task of describing the garden to discuss the gardener, who is an actual living being, and, though lowly in estate, is to my mind a striking figure in the world of horticulture.

With his own lips this poor blind man told me that his twenty rod allotment had been his salvation in more respects than one. Blindness came to him when he was too old to learn any trade, and he stood in danger of going melancholy from the need of something to occupy his mind. In the days when he enjoyed his eyesight he had a taste for gardening, which fortunately did not leave him, and he found in his plot that solace which he could not get elsewhere. So perfect has practice made him in his various operations, that some narrow-minded, suspicious persons have been heard to suspect that he can really see, and the blindness is a sham; but knowing better, as I do, I will let that pass for what it is worth.

A stout stick is the man's constant companion. With it he feels his way to and from the allotment, and by its aid he works about his various crops. For more than twenty minutes at a stretch I have watched him, but without revealing my presence, engaged in such an intricate operation, for a blind man, as thinning Onions. Every moment I expected to see his foot go on to the row or a plant come out that should be left in the ground. But old blind Richard is too expert at Onion thinning for that. His fingers move among the plants with lightning-like rapidity in feeling over the seedlings to determine their character, and measuring distances. He seems to have a special touch for weeds, and never did I see him pass one over. In fact, to watch him is a wonderful illustration of the capacity of a blind man, and I can only assume that with the loss of his eyesight his sense of touch has grown more acute.

It would seem also that Richard's sense of imagination has also developed, for on several occasions after making my presence known to him he has invited me to walk round the plot with him, while he has discussed the various crops, just as any person might who was endowed with all his faculties.

"There's a row of Peas, not looking so bad, are they? What do you think of those Beans? Onions are doing well, aren't they?" These are a sample of Richard's remarks; while he has stopped before some crop that did not look so well as it might, and remarked dolefully on its appearance. As he feels his way along the path that runs the whole length of the allotment, Richard has no guide but his own memory and imagination to aid him in the location of the various crops; yet I never knew him to make a mistake. He has an "eye" for beauty, too, for at the top end of the plot he has a bed of simple garden flowers, which he genuinely admires, and were not the sight so pitiable it would be amusing to see a blind man turn up a Carnation or some other flower and remark upon its character and form.

"Now, Richard," I once remarked, "you can't really see all this, then how does it appear to you?"

"No, I can't see it with my eyes," answered the man, a tear trickling down his furrowed cheek, "and yet in a way I can. My whole plot is in front of me, almost as clearly as if I could really see it, and I know as well as could be where every plant is, and how it is doing. I don't know how it is, except that I go over the ground a goodish many times."

This is quite true, and it is a touching sight to watch the man when engaged in the work of planting or sowing. He takes the line of wire netting at the end of the plot as his starting point, and then, by means of lines and numerous measuring pegs, he sets out the rows, going over the ground time after time, before he is satisfied that every-

thing is correct. I may say, however, that so accurate is his judgment that from one end of the plot to the other every row of crop is parallel to its neighbour, perfectly straight, and quite square with the shape of the ground. This speaks volumes for a man who cannot see his hand before him.

Nor is blind Richard only an ordinary everyday sort of allotment gardener, for he is a leading light in the local gardening society, and secures a fair share of prizes at the monthly meetings and the annual show. He is close to the top of the list of prizewinners every season for the cleanest and best cropped allotment in the parish, and without any special favours at the hands of the judges, for Richard would not care to win on those terms, but prefers to start level with his neighbours and trust to his own gardening skill to bring him out somewhere in the front rank. One thing that Richard has at his disposal is time, for his blindness prevents him following any occupation, and it may safely be said that his allotment is his hobby, companion, and friend; in short, it forms the greater part of his life, and it is a standing joke amongst the rest of the plot holders that there is no fear of birds of any kind doing much damage to the crops, because Richard is always there.

In his gardening operations the blind man is not without friends, one of whom presented him with the wire netting to surround his plot, because the rabbits were such a plague to him. Another helps him with manure, a third with seeds, and there are several persons in the village who buy Richard's produce when he has any to dispose of; so that, as he puts it himself, "he manages to grub along one way or another, and keeps outside the workhouse."

Such is my concluding type of garden and gardener, and if the presentation of it does nothing more, it gives an illustration of the subtle power of the gentle art of horticulture, which can bring a ray of light and solace to a poor afflicted creature whose life, hard as it must be now, would otherwise be all darkness.—A BRITISH RUSTIC.

[This is the concluding article under this heading.—ED.]

Retarded Lily of the Valley.

It cannot be denied that the originator of the system of retarding the various bulbs, roots, and plants conferred an inestimable boon both on the flower-loving public, and on those made responsible for a winter and spring display for decorative and other purposes. It is only too clearly remembered what futile attempts have been made with home-grown and purchased roots with a view to force them into early growth in past times. Those so grown, too, were bereft of the natural foil which their own foliage supply, and Valley Lilies are not much without foliage.

The forcing of these ever-favoured flowers now becomes a very simple matter. A warm greenhouse will, in the space of from two to three weeks, afford a display of these delightful flowers in numbers and effect consistent with the extent of purchase. That they are more expensive to purchase is a fact that justifies the thought, for the cost of upkeep and the investment of retarding plant must be borne by those for whom it is provided. The certainty of result, however, together with the production of such finely developed leaves and flower spikes, makes the cost appear much less, and except for late spring use I should neither adopt nor advise the purchase of any but retarded roots. Those Journal readers who have refrained from purchase of these retarded Lilies have no idea what a welcome change over and above the natural root is thus effected.

The point so much in their favour is simplicity of culture, and this is one that should appeal to the amateur and gardener not well provisioned with forcing houses and pits. Forcing, as this is usually understood, is not at all necessary, because a greenhouse temperature will bring them on—more slowly, of course, than a warmer house will do.

Another point of value following this cooler conditioned culture is that they last so much longer either for room adornment or the smaller stages of the conservatory than the hard-forced pot. The crowns are so well selected that rarely does there appear a flowerless growth. The investment, therefore, combines a profitable as well as a pleasurable aspect that cannot afford long to remain unrealised and untried by every class of cultivator.

—W. STRUGNELL.

"SYMPATHY" IN PLANTS.—A week ago we observed in Wm. Paul's nursery a batch of *Populus argentea* growing next to the golden Canadian variety. The former were all tinged with yellow.



The Climbing Varieties.

(Concluded from page 174.)

Nowadays this section is much more sought after than formerly. Pergolas, arches, and poles are so much more in evidence in gardens that a list of varieties specially adapted for this purpose may be of service to intending planters.

Crimson Rambler still holds the place as the most gorgeous Rose in existence. It is difficult to plant this Rose out of place, except at the foot of a south wall, where it does not succeed owing to red spider attacking it. Growing over a rustic arch, up a pole backed by evergreen shrubs, or in front of a specimen golden Yew, or allowed to grow in a natural manner on grass, are the ideal spots for this Rose.

Aglaia is a disappointing Rose to those who do not understand its requirements, as until it is established and thinly trained it fails to flower abundantly. When it does, its appearance is simply magnificent, smothered as it is by a full crop of pale yellow blossoms in clusters.

Céline Forestier is not now planted as much as its merits deserve. Given a south wall or another sunny spot, and liberal treatment at the roots, then abundance of its light yellow blossoms would be forthcoming.

Ards Rover is seldom seen; no Rose that I know of gives more pleasing blooms. The colour—crimson-shaded maroon—is pleasing, while it has a perfume all its own. In growth it is vigorous, carrying large deep green leaves. Claire Jacquier, for a pergola, is unequalled where a mass of nankeen yellow is required.

Dorothy Perkins is quite an autumn flowering Rose, and all the more valuable in consequence. The small double rose pink flowers are produced in large clusters, most sweetly scented. The growth is vigorous, making shoots twelve feet long in a season. This Rose is said to be of American origin, and has, I should say, some Wichuraiana blood in it.

Félicite Perpétué, for freedom of growth and flower, is quite one of the finest of climbing Roses. Planted at the foot of a south wall and allowed to ramble away at will is an ideal way of cultivating this variety. Over a pergola, tree, stem, pole, or arch, in any aspect, this Rose is a gem. The small flowers are produced in huge clusters, and are white, with a faint flush of pink.

Mdme. Alfred Carrière is a good pillar Rose, giving shapely blossoms—white with a flush of yellow at the base of the petals. Noella Nabonnand has rich, velvety crimson, semi-double flowers, most beautiful in bud and gorgeous when fully expanded. Its growth is vigorous.

Psyche is a pale rosy pink, suffused at the base of the petals with salmon and yellow; a free flowering variety, and capitally adapted for a pergola or pole.

Queen Alexandra is best described as a rose-coloured form of Crimson Rambler, from which it is a seedling. Reine Olga de Wurtemberg is semi-double in form, having vivid red blooms.

The Wallflower is a desirable Rose, flowering most abundantly, rosy lake crimson in colour.

Thalia, or White Rambler, is a pure white free flowering variety worthy of extended cultivation. Waltham Climber No. 3 is a vigorous growing variety, producing large deep crimson blossoms quite freely.

Paul's New Tea Rambler promises to be an acquisition. The colour is so attractive—salmon pink, heavily suffused with a coppery sheen. The flowers are small, quite shapely, and abundantly produced.

Climbing Mrs. Grant is a sport from that popular Rose, Mrs. W. J. Grant, and is characteristic of that variety in every way except growth. The blooms are most shapely; colour, salmon pink.

England's Glory may best be described as a pink Gloire de Dijon. Alister Stella Gray is a glorious pillar Rose, flowering quite late, rendering it all the more valuable; white with yellow centre.

Lamarque, where a southern wall can be given it, is quite one of the best climbing Roses. The flowers are produced in clusters. When in bud the colour is pure white; fully expanded blooms have a cream or yellow centre.

The Garland has huge bunches of small semi-double flowers, nankeen and pink, which change to white. Fellenberg has crimson lake flowers, which are freely produced; a good variety for a pole or tree stem.—E. MOLYNEUX.

Rose, Morning Glow.

This we saw in Wm. Paul and Son's nursery at Waltham Cross on September 16, giving a grand account of itself. The flowers are bright rosy crimson, suffused with orange; it is dwarf, vigorous, and very floriferous.

Cucumber Culture for Market.

(Concluded from page 103.)

The question is often asked whether it is better to grow two crops in one season or let one planting run right through. A house that is planted, say, the middle of February, or after, is better let run through the season. I can generally get more Cucumbers with one planting than if I planted twice. I find it best to cut all the old wood out of them about June; and by giving them a good thinning out, they will then make a lot of fresh growth with a bit of coaxing and feeding, and in a short time be practically a new house, and will throw some first-class fruit.

In giving air to "Cues" the temperature of the external atmosphere must be taken into consideration, as the lower this is, the greater care is necessary in its admission. I find during March and April, before you have got them shaded, it is better to air them early, say between eight and nine o'clock if it is likely to be a hot day: just a crack about this time; and increase a bit later in the morning. This saves them from scorching, which checks them considerably. I never shade until I am obliged to, and then only just sufficient to stop the glare of the sun. After shading you should reduce the air, only opening the ventilators after the thermometer has reached 85deg.

Cucumbers should be closed up early in the afternoon, always give them a good damp down, and close up by half-past three o'clock. In applying water there is one rule to be observed, and that is: water only when necessary, applying such a quantity as will soak the whole mass of the soil. I have known cases where it is a rule to water every morning and damp down a stated number of times per day, regardless of the outside weather conditions; and the plants receive a soaking at the roots at equally regular intervals with a supreme indifference as to whether they require it or not, until the soil becomes sodden and sour, resulting in the inevitable decay of the roots and consequent inability of the plants any longer to produce first rate fruit. It is wise, therefore, to be careful in the application of water to the roots of the plants, for, depend upon it, more failures are brought about by the excessive use of this than from all other causes put together. It is better to closely examine the beds before watering, and if the plants require watering, perform the operation; but a good deal depends upon the weather, for sometimes two waterings per week will be found sufficient; other times they will require three or four waterings.

Disease and Pests.

Cucumber disease, commonly called "gumming," sometimes attacks the plants, and there is no cure for it. The origin and cause are very obscure. There are two things which I believe are most likely to cause it; they are bad drainage, and watering with the water at too low a temperature. Should anyone be so unlucky as to get disease in the house, the best plan is to root-out the plants, and after cleaning the house thoroughly, make a fresh start with new plants and soil. This is the only safe plan, and the sole one I can recommend. Green fly and thrip can both be exterminated by fumigating.

Red spider is one of the worst enemies the Cucumber grower has to contend with. Dryness at the roots, and where atmosphere is not kept sufficiently moist, will give cause for the pest. There are several fumigators on the market that guarantee to kill, but I have failed to find one as yet without doing serious harm to the foliage. My plan with red spider is to apply clean water plentifully through a fine-roset syringe, morning and evening. This is repeated for about a week, and the air kept surcharged with moisture will clear them off. Woodlice do injury in some cases, but, as a rule, it is not of much moment unless the insects are very numerous, in which case they must be cleared off as soon as possible. The best plan is to stop the drainage holes in some flower pots, and place a piece of boiled Parsnip or Potato at the bottom of each, and then fill up lightly with some moss or hay. Take up the pots first thing in the morning and empty the contents into a pail of boiling water. Follow this up, and you will soon clear them out. Wireworm being occasionally present in the loam, and causing much injury to the plants by feeding on the roots, a close inspection of the soil before it is used is necessary. If on examination you find it contains the wireworms you must either break the soil up into small pieces, and thoroughly examine it, or bake the soil until it is too hot to handle. No preparation will destroy wireworm without being injurious to the plants.

Mildew is induced by a dull, stagnant atmosphere. Its prevention is easier than its cure, as, with a proper amount of air, mildew will be absent. If it should appear, the best remedy is to get some flowers of sulphur and make it into a thin paste; then spread it on the hot water pipes. This, with a fair amount of air, will soon dry off the mildew.

Careful selection as to the size of marketed fruit is necessary, for, while small fruit is small priced, that which is large and coarse is of still less value. "Cues" from a foot to 18in in length are the most remunerative, as they sell freely at a fair price; while longer ones, if in fine condition, obtain relatively higher

prices, but do not sell so freely, and the most prolific varieties exist amongst the shorter fruited kinds. A "Cue" from a foot to 18in in length does not exhaust the plants so much as a longer one: thus more can be grown in a given space.

The four best varieties for market purposes are Western Wonder, Masters' Prolife, Tender-and-True, and Cardiff Castle, the latter being the best of the four. In conclusion, I will say that the quality of the produce must be first-class; and its condition when unpacked in the market must be the same, as only the best articles obtain the highest prices. They should be packed tight, so that they will not shift about in the flats. As I mentioned before, the better the fruit looks, the higher prices it will obtain, and in all market work appearance is really as important as quality.—(Read before the Cardiff Gardeners' Association on February 24, by Mr. WALLER, Cucumber grower to Messrs. Nurton and Co., Dynas Powis, Glamorgan.)

Shelter Hedges.

Not only shelter hedges, but hedges for ornament as well; and the purpose of the illustration which accompanies these notes is to draw attention, ere the planting season begins, and plans have

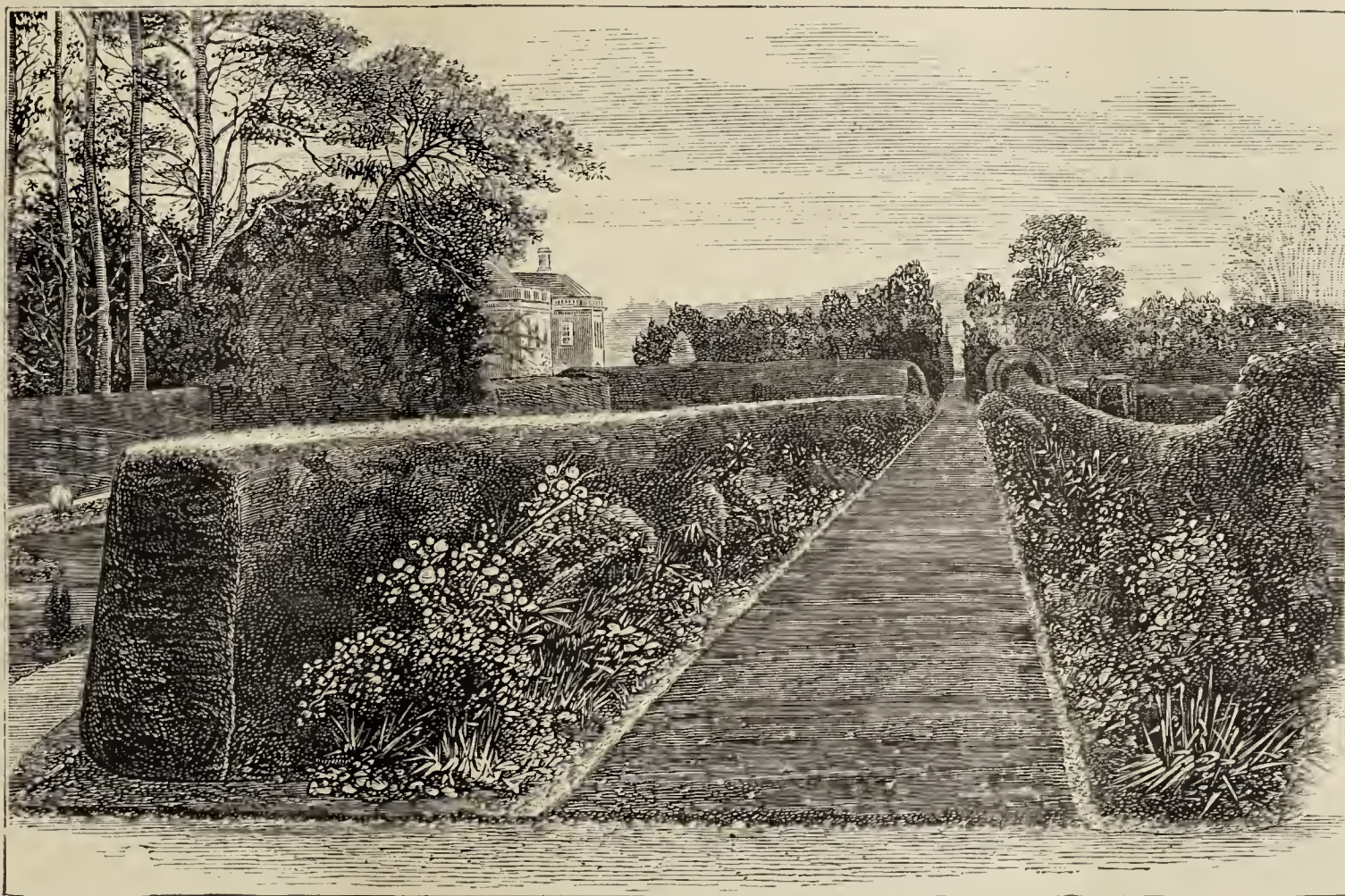
Gadding and Gathering.

Richard Smith & Co., Worcester.

Worcester is a quiet little town, at the present time undergoing a transition from the horse tram-car system of transit, to an electrified one. The township lies in the midst of a fertile country, in the valley of the Severn, the Malvern Hills being in sight south-westerly; and within twenty or thirty miles are the renowned fruit lands of Evesham (southward); Shakespeare's birthplace to eastward; and Warwick, Birmingham, Dudley, and Kidderminster northwardly. The county of Worcester is like Cromartyshire in Scotland in this, that many of its parts are quite detached from the main area, and are surrounded by other shires; yet they are fragments of Worcestershire. The mineral springs and brine baths of Droitwich, a few miles from the county town, have a European reputation.

So much for a general statement; and now for a few notes on Richard Smith and Co.'s nurseries, a name known everywhere. The visit to which these notes pertain was only of one hour's duration, which enabled one to see only the hardy plants and some of the shrubs.

Elæagnus aurea variegata was pointed out as being one of the shrubs for which a brisk demand has been made. The *Elæag-*



Sheltering Yew Hedges and Grass Walk.

been made—to draw attention to the cosy, clothed effect produced by Yew hedges. They are always clean, and are not, to our knowledge, subject to blights or insect pests. They do get dusty, and may catch soot in smoky districts, but on the whole the Yew is one of the best ornamental hedge plants we have. Planted a foot and a half apart, in a well-dug soil (almost any soil will suit the Yew) the plants speedily establish themselves, and make rapid growth. They need hardly be touched with the shears for three years; but when they have interlaced and are becoming thick-set, the lateral growths may be shorn evenly in. This will be continued annually afterwards. It is well to cut pretty hard at first, in order to get a good centre to the hedge. A mulch of short dung is very beneficial. On dry, poor soils the Yew sometimes dies unexpectedly, but generous treatment can do much to prevent this. With a double-lined hedge, and borders for "old and new fashioned" hardy plants, the most fitting path is a grass one: a firm sward.

nuses are ornamental, showy, and not deciduous, so that a place can always be found for them. Another subject of much grace is the cut-leaved weeping Birch, of which some lovely trees of a mature age were noticed in Messrs. Smith's grounds. Their weeping Beech near the offices is quite a specimen figure, and is widely known. A figure of it appears in the firm's catalogue of general nursery stock.

While writing of the arborescent members, it is fitting to allude to certain Bamboos, including amongst them the following:

Phyllostachys Marliacea, which is a beautiful subject, making 8ft to 9ft of growth in a season at Worcester. It is said to be rare.

Arundinaria nobilis and *Simoni*, forming handsome, feathery, irregular masses 10ft high.

Phyllostachys sulphurea, having bright golden yellow stems, slender reed-like growth, and narrow light green foliage. The stock of this is limited and valuable.

Phyllostachys heterocycla, another slender kind, is also rare.

Phyllostachys Castillonis, a robust plant, and very beautiful at St. John's Nurseries, was other to which attention was directed. Some of these are grown in tubs and pots under glass, while many of the hardier sorts flourish in the open-air collection. For those who may wish a list of these plants, I print from Cook's book on "Trees and Shrubs" the following,

LARGE AND HEAVY PEACHES.—A large Peach was lately exhibited at McKinney, Tex., measuring 13in and weighing 13oz. Dr. Trimble, of Duplex, twelve miles north of there, exhibited a Peach which measured 13in in circumference and weighed exactly 14oz.

which have proved the hardiest and most ornamental at Kew: *Phyllostachys Henonis*, *P. viridi-glaucescens*, *P. flexuosa*, *P. nigra*, *P. boryana*, *P. sulphurea*, *P. Marliacæa*, *P. ruscifolia*, *P. Castillonis*, *Arundinaria nitida*, *A. japonica*, *A. auricoma*, *A. fastuosa*, *A. Simoni*, *A. Fortunei*, *A. anceps*, *A. Hindsii* var. *graminea*, *Bambusa palmata*, *B. tessellata*, and *B. marmorea*.

Solanum crispum is a trifle tender I believe; but where it succeeds, such as in the Bath Botanic Garden, it is undoubtedly a charming subject. The clustered flowers are pale lavender-blue, and the bush has a close furnished habit of growth. Against a wall it does well in less favoured districts. Also of a shrubby nature is the Southernwood or American Sage (*Santolina viridis*), a huge plant of which all but covered one of the rockery mounds here. The flowers are mere yellow disks, like so many golden balls held forth on green stakes. The plant, of course, is odorous, like others of its kind.

Passing by one of the numerous hedges which serve as divisions to the brakes and shelter screens as well, a glorious show was furnished by the Flame-flower, *Tropæolum speciosum*. The roots are set on the north side, the growth running through the hedge, climbing up and flowering on the south side. The hedge is *Thuya Lobbi*.

The *Eryngiums* are a host in themselves, and one of the best of them is the true *amethystinum*. *Oliverianum* (*amethystinum* of some) lasts better than *alpinum*, which has lighter bracts than the foregoing. *E. planum* grows 18in high, and has white and blue stems. The rounded blue inflorescences are numerous borne. Lastly, we may note *E. Bourgati*, growing to 2ft, and has beautiful light blue bracts, making it certainly one of the finest.

Platycodon grandiflorum album will be prized by all who know or grow the blue form. It is rather scarce, therefore all the more valuable. Somewhat in the same line is the double white flowered nettle-leaved *Campanula*, which, I feel sure, is less grown than its merits warrant. It is a real good border plant. One of the best of the *Rudbeckias*, too, is *maxima*, with long "cones" and yellow ray petals. Altogether it is very handsome.

To mention another plant of much refined beauty, and hitherto overlooked, one need but name *Digitalis ferruginea*, one of the Foxgloves. The tubes are of a peculiar, quiet, greyish brown, the lip or front of each being pure white, and as the plant grows 2ft high this would make a pretty addition to vases or glasses of cut flowers. It flowers in July and August.

The Snow Queen variety of *Lupinus arboreus* is one of the best shrubby border plants we have had during recent years, and some

There are the crimson berried spikes of *Actæa spicata*, a fine subject, with foliage like *Spiræa japonica*. *Prunella Webbiana* has handsome rosy flowers, making it valuable along with the purple-blue type. *Ligularia* (*Senecio*) *thyrsoides*, with its Cabbage-like leaves and handsome flowers, is another capital wild garden plant. *Chrysanthemum leucanthemum lacustre* seems to be an improved form of *latifolia*. It is taller, and has handsome, pure white flowers, and robust growth. *Cimicifuga racemosa* is a favourite everywhere, and is a distinctive plant.

In *Campanulas*, apart from those more generally seen, attention was claimed for *C. Bononiensis* and *C. alliariaefolia*, the latter with leaves like a Burdock, and has drooping white flowers 1½in long, borne in long racemes at the ends of the shoots. The first named has bluish-violet flowers in long racemes.

Anthericum graminifolium is graceful, and *Oenothera speciosa* is showy. *Statice Bonduelli* is a yellow biennial "Sea Lavender," sometimes grown in pots for spring use in conservatories. Then we have *Chelone latifolia* or *Pentstemon pubescens*; and the true *Helianthus mollis*, together with *Achillea* "Snowball," and the blue *Delphinium formosum* *Belladonna*, are each very choice hardy border plants.

In a concluding sentence one must name *Tunica Saxifraga*, pink flowers like those of a *Claytonia* or small *Dianthus*, and foliage resembling *Nierembergia*; also *Salvia virgata* and *S. argentea*. All departments of nursery stock, from trees and shrubs and fruits, to tender exotics under glass, are grown extensively by Richard Smith and Co.—WANDERING WILLIE.

Jottings for Decorators.

The floral embellishments in many large private houses are now often carried out on a most extensive scale, too much so for the peace of mind of many a struggling gardener, who is trying to accomplish great things with the moderate facilities at command. Under the most favourable circumstances it is not an easy matter to hit upon new ideas, or to find materials of the right description to carry them out successfully. One great essential, if not the greatest essential, in connection with decorative work, that it must possess elements of boldness if it is to achieve more than passing notice. The huge trumpet-shaped vases often used in entrance halls and large rooms, are capable of contributing the necessary boldness, provided they are well arranged with suitable materials; but they are too often dressed with a total disregard to proportion, and few things look more incongruous than to see a big vase supporting an arrangement of flowers and foliage, so insignificant in size and devoid of striking effect, as to make the vase appear far more prominent than the decorations.

I have no doubt that all of us sometimes err in this direction, not through being unaware of the weakness, but because suitable materials are not always at command. The lake, pond, or river bank will, at this season of the year, and onward through the autumn months, help many out of such difficulties, as Reeds and Rushes of every description—especially the Reed Mace, wrongly called the Bullrush—are splendidly adapted for such work. I have, however, quite recently become convinced that, with very little trouble, gardeners generally might increase their stock of materials suitable for supplying boldness to their decorative work. Not nearly enough use is made of the various varieties of Maize, and by growing good batches in pots and in the open ground splendid materials would be secured during the summer and autumn months. *Zea japonica*, and its variegated form are often used for bedding purposes; both might, with advantage, be largely grown in pots; but what I find to be still better is the strong growing flat-seeded Maize.

About the end of last April I obtained a few seeds from a corndealer, and planted them in a narrow border against the back wall of a greenhouse. By the aid of plenty of water and liberal feeding the resulting plants grew grandly throughout the summer, and now they range from 8ft to 10ft in height, all crowned with feathery plumes, and form some of the finest material I have ever seen for giving boldness to decorative work. Some of them will soon play a prominent part in harvest festival decorations. If cut close to the ground, and the cut stems are plunged at once into water, they will be splendidly adapted for arranging in large vases, or in groups of plants. Just at the present time, when large Russian Sunflowers are plentiful, these might be cut with stalks from 3ft to 6ft in length, and arranged in a trumpet vase with a single plant of Indian Corn



Commercial Culture of Hyacinths. (See page 282.)

Toogood and Sons.

fine samples were seen here. *Dianthus Walkeri* and *D. coronaria alba* are both gems of their types; while *Potentilla Hopwoodiana*, a lovely variety (hybrid?), with quantities of salmon-pink flowers, was much admired and chosen from amongst others. *Potentilla verveana* is also a telling sort, having brilliant orange-scarlet flowers. *Phygelius capensis* is good in its way, with drooping crimson flowers, and is fairly well known.

While referring to *Rudbeckia maxima* I omitted to notice *R. hirta*, which flowers a month earlier than *R. speciosa*; and *R. digitata* and *triloba*, each of which are very good.

One might go on for a long time naming hardy plant gems from the St. John's Nurseries, but these notes are already becoming lengthy. Brief references must suffice for what remains.

rising above them, and common *Asparagus* intermixed, also long trails of *Ampelopsis* beneath, would then form an object of striking beauty.

In arranging the noble corn stems among groups of plants, the ends should be inserted in large wide-mouthed bottles filled with water; the bottles could then be easily hid by the surrounding plants, and if necessary, moss could be packed in firmly to keep the stems in position. A little later on when giant blooms of *Chrysanthemums* are, for the time, the kings of our gardens, the stately Maize plants would be fitting companions to associate with them in filling large vases, or in groups of plants. In fact, the uses to which such bold materials may be put are so numerous that the busy decorator would welcome them in large quantities. The great point is to have them when wanted; and those who lack them now should provide a supply for next year by sowing successional batches of Maize seeds next spring, and growing some of the plants in a sheltered position in the open air, others in pots, and a few in odd corners of glass houses, where they may be planted in borders, and will give but little trouble.—ONWARD.

[The following are useful for large vases perhaps not often enough requisitioned: Golden Cut-leaved Elder, golden and purple *Corylus* or Hazel-nut; yellow forms of the Elm; *Prunus* *Pissardi*; *Berberis* in sorts; *Rosa* *rubrifolia*, *Physalis* *Alkekengi*, Snowberry, golden reticulated Honeysuckle, and variegated *Vinca*.]

Sir William Chambers.

Sir William Chambers, of Scottish parentage, was born in Sweden in 1726, but came to England when only two years old, and was placed at Ripon School. On arriving at manhood he became supercargo of a Swedish East India ship, and made one voyage in that capacity to China. On his return he commenced the study of architecture under the patronage of Lord Bute, by whose interest he was appointed drawing master to the Prince of Wales, afterwards George III. His first architectural erection was a villa for the Earl of Besborough at Roehampton. He was afterwards employed in laying out the Royal Gardens at Kew, where he introduced the Chinese ornaments. In 1771 he was invested with the Swedish order of the Polar Star. He became a Fellow of the Royal and Antiquarian Societies.

In 1775 he was appointed to conduct the erection of Somerset House, being Architect to the King, Surveyor General to the Board of Works, and Treasurer to the Royal Academy. In 1758 his style of design, &c., was severely attacked in two satires termed "An Heroic Epistle," and "An Heroic Postscript of Sir W. Chambers." In that Heroic Epistle is observed that "he teaches us that a perfect garden must contain within itself all the amusements of a great city; that *urbs in rure*, not *rus in urbe*, is the thing which an improver of true taste ought to aim at."

The volume which entitles him to our notice is entitled "Plans, Elevations, Sections, and Perspective Views of the Gardens and Buildings at Kew in Surrey, the Seat of H.R.H. the Princess Dowager of Wales. 1763." In the introductory description of the plates is mentioned that Mr. Kent designed some of the ceilings and chimney-pieces. Sir William remarks that "the situation of the gardens is not advantageous, as it is low and commands no prospects. Originally the ground was a dead flat, the soil in general barren and without either wood or water. What was once a desert is now an Eden. The judgment with which art has been employed to supply defects of nature and to cover its deformities hath very justly gained universal admiration. The orangery or greenhouse design is mine, and was built under my inspection in the year 1761. The physic or exotic garden was begun in 1760. For the cultivation of the plants I have built several stoves." The thirty-ninth plate is of the aviary and flower garden. Sir William Chambers died March 7, 1796, at his house in Norton Street, London, and was buried in Poet's Corner, Westminster Abbey.

Bedding in London Parks.

(Continued from page 210.)

The following notes are a continuation of the descriptions of Hampton Court bedding:—

3. Another bed, 27ft long by 15ft broad, had *La Fayette* Begonia a foot apart all over, with two dozen plants of Gardeners' Garter (*Arundo* *Lindleyana*); the same number of *Eulalia gracillima*; while all over the surface, between the Begonias, was the wiry, grey-skinned *Leucophyton* *Browni*. The edging was *Abutilon megallanicus*, otherwise called *A. vexillarium*, the latter pegged down. This was at once a simple, yet brilliant bed.

4. Foliage and flowering bed (27ft by 15ft). This was filled with *Abutilon vexillarium* as standards, 5ft and 6ft high, bearing flowers. Beneath these were *Salvia* *Horminum* and Mrs. Pollock *Pelargonum*, edged with *Antennaria*.

5. *Kochia scoparia* and *Centaurea candidissima* were used in another bed similar in all its other features to the foregoing. The *Kochia* is very neat, and its pea-green colour is beautiful; but the plants must be maintained small, else they get too formal and dumpy.

6. Foliage and flowering bed (27ft by 15ft). There were twenty-one *Fuchsia gracilis*, of bushy, floriferous character; also *Arundo* *Lindleyana*, and a good toning of *Begonia semperflorens atro-purpurea* (chocolate leaved) above a dense white carpet of *Koniga maritima*, the Sweet Alyssum, and edged with *Echeveria*.



1726—Sir William Chambers—1796.

7. Circular bed (12ft diameter). This had double crimson tuberous Begonias, yellow *Celosia pyramidalis*, and *Arundo* *Lindleyana*, the surface being carpeted with *Mesembryanthemum*.

8. Salmon-apricot coloured double tuberous Begonias over a carpeting of *Mesembryanthemum*, and having dot plants of *Eulalia gracillima*, the whole edged with *Abutilon vexillarium*, was exceedingly rich and fine. This was certainly one of the finest beds. The Begonias were a selected strain, all coloured apricot, or apricot-salmon and carmine.

9. *Lobelia fulgens* and *Gaura Lindheimeri* over Harrison's Musk, was very graceful and highly effective. So, too, was the large bed (20yds long) filled with *Tritomas* or Red-hot Pokers, *Montbretias*, and *Galtonia candicans*. Then, again, bushy, pyramidal plants of *Veronica Andersoni variegata* over *Verbena venosa* and *V. ericoides erecta* (white), was good. A few *Abutilon Thompsoni* plants, and the broad edging of *Stellaria repens*, gave added effect. *Anemone japonica* above Blue Bell Viola, is perfection.

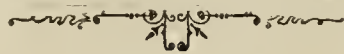
Regent's Park.

Under the superintendence of Mr. A. D. Webster, who succeeds Mr. Jordan (now in charge at Hyde Park), the many frequenters of this fashionable park have every reason to feel thoroughly satisfied with the bedding arrangements of this season. Perhaps in colour contrasts some alterations for the better might be effected, but the season has been of the worst description possible for effective bedding.

Regent's Park boasts one very large bed of Cactaceous plants imposingly grouped. In it are Aloes—huge plants towering high upon eminences, and having smaller samples of their kin at their base and round about them. *Sedum glaucum* and *Lotus Jacobaea* are two of the carpeting plants used all over the surface. *Yucca filamentosa variegata* stands out here and there, as do plants of *Echinocacti*; while the bays and interspaces are devoted to *Kleinia repens*, *Pachyphyton rosea* and *Mesembryanthemum cordifolium variegatum*. *Echeveria metallica* and *Sedum tabulaeforme* are placed in places best suited for them; these are large plants of their type.

A narrow border of *Nicotiana affinis* with small slender plants of *Fuchsia virgata* (finer than *F. Riccartoni*), and thirdly, a sprinkling of crimson *Celosia pyramidalis*, is worthy of note. A similar narrow border, in fact, a yard wide, and backed by a dwarf hedge, contains a back line of *Dracenas*, set 6ft apart, the interspaces having bushy plants of *Veronica Andersoni variegata*, the undulating front line being of variegated *Dactylis* or Cocksfoot Grass, mixed with rosy everflowering Begonias (*B. semperflorens*), and a margin of Bluebell Viola. This is very pretty.—D.

Impney Hall, Droitwich.



Sometimes the garden makes the gardener; generally the gardener makes the garden. By his effort or want of effort, so is the garden rich or poor, well dressed or ill, beautiful and plentiful in its products and features, or otherwise. Impney is a garden where the man in charge makes the impress of his assiduity apparent in many ways. He cultivates well; he cultivates intensively. The walls of the Muscat vinery afford an illustration, for they are clothed with cordon Pears, a thing not to be seen once in a hundred places; and if the reader will follow these notes to their conclusion, he will find that the most is made of the available space and materials.

The estate, if not very extensive, is well planned, and has charming features. Impney Hall is a beautiful mansion built of ornamental red brick and creamy sandstone, in turreted style, with Grecian angles, giving it an air of elegance and grace that pleases everyone. The powers of the architect had been further exercised at the time of erection in 1875, by carrying out his plan to form a handsome terrace, surrounded by an ornamental wall, and having flights of steps, a forecourt, and a lovely fountain and statuettes within its area. This terrace is on the west front, and furnishes the best scenic view of the park, and a wooded eminence named Pidzer Hill, that culminates the scene about half a mile in front. This little verdant Oak covered hill, rising 500ft, gives much character to the immediate environs, and is well known locally. Between the hill and the terrace lies an ornamental sheet of placid water, whose sinuous shore is suitably planted. With wood, lake, park, deer, and plenty of enlivening bird life, the surroundings are very pleasant.

The Terrace Garden.

The prettily designed walls of the terrace are laden with Crimson Rambler Roses, whose floriferousness could certainly not have been surpassed. Finding that the stone of which the wall is built was not weathering well, but was likely to crumble rapidly, Mr. Corbett, the owner, had it covered with the close-growing Ampelopsis, whose growth is now enswathing the material, and so protecting it. Along the top of the same wall are fixed marble sculptures of the head and busts of twelve or fifteen Roman generals, statesmen, and emperors. The terrace parterre is nicely bedded in the conventional manner; and in keeping with the strictly formal scheme are the upright Yews and shrubs dotted here and there. This western front altogether is of rich interest in a number of ways.

The kept grounds contain some shapely Wellingtonias and Cedruses, and the single line of the former that skirt the outer limit on one side of the fruit and vegetable garden, are most imposing and exceedingly handsome. Between them and the garden wall (outside the latter) there are magnificent hardy plant borders (separated by a central path), whose great feature at the season of my visit was the bold groups of Spiræa Aruncus, and the standard plants of William Allan Richardson Rose. Pæonies in the early summer, Dahlias and Delphiniums later, together with Pinks, Stocks, Pyrethrums, Asters, and many other of the best subjects of the English flower border, were here noticeable. The verge is of grass, is kept in prime condition. Some Cupressus macrocarpa trees, 20ft high, in line with the fruit room and offices, were good of their kind, but Impney is not famous for its coniferous or its flowering trees.

The Indoor Fernery.

The indoor Fernery is, however, something to wonder at, and few similar places are to be found in gardens. Another large and notable indoor fernery is at Woodside, near Paisley, in Renfrewshire; and elsewhere one finds a small construction, generally the work of Pulham, London; but our view on the opposite page shows the Impney house to be of considerable dimensions, and possessed of large Tree Ferns. The view is only a small corner of it, and indeed, one man is kept employed in the house practically the whole year through.

Originally a disused gravel pit close to the mansion, it was transformed to what it now is, in 1890. The house is 150ft long by 60ft wide. It is approached by rugged steps, planted with hardy Ferns, Ivies, and other plants; but a more private entrance is from the hall, through a grotto to the fernery. The building is heated by a powerful boiler 150yds away, and the six 6in pipes are hidden by built-up rockwork. The rocks, caves, steps, and bridges are formed with tufa stone brought from Matlock Bath, and about 200 tons were used. The water enters dripping at a cave in one end, and runs in a winding stream the whole length

of the house, golden carp luxuriating here. In suitable places there are seats, and the whole structure is electrically lighted. When the building was completed Mr. Corbett imported fifty Tree Ferns from New Zealand, and there are, of course, a considerable variety of other Ferns and plants.

The Glass Houses.

The progress of these notes has now brought us to the plant houses, a brief review of which, and a look at the kitchen garden, will conclude this summary survey. The glass ranges are in good keeping, and their contents are meritorious throughout. Fruit is a leading feature, and Mr. Jordan, the gardener, yearly secures some of the leading awards at the greater English shows, as close Journal readers may have noticed. Strawberries to the number of 1,800 are forced annually, and Strawberries entail much labour ere they yield their crops. The variety employed is Royal Sovereign.

Melons and Tomatoes are plentiful, and the variety of Tomato named Worcester Prolife, which is a new one of Richard Smith and Co.'s, crops heavily, and has nice shapely fruits; while of the Melons we find Royalty, British Queen, and Frogmore Orange each in favour. The latter is recommended as a good early scarlet fleshed. It is worthy to be recorded that no less than eleven batches of Melons are planted each year, the first cutting being about April 30, and the last at the end of the present month. The earliest batches are grown in pots, and only one fruit is taken from each plant.

Though there is no special pit for Pines, just as there is no orchard house for pot fruit trees, yet the gardener at Impney manages to cultivate both sections: the Pines in the centre of a plant stove, and the pot fruits in the peacheries and vineries, placing them at the front of the house, beyond the trellis, for the sake of the greater light. The Pines were heavy and even, some of the Queens weighing the respectable figure, 6½lbs; and Smooth Cayennes 1lb heavier. The side stages of this house contain shapely, clean, and brilliant Crotons.

Pines and Bananas.

One feels disconsolate on reflecting that Pine culture is so little attempted nowadays, notwithstanding a plentiful market supply of cheap fruits; for the latter will never taste so well as those from one's own pits and houses. In order to give the younger men the necessary cultural hints, the *Journal of Horticulture* still supplies occasional "Jottings on Pines," and in this connection it deserves well at the hands of gardeners.

Then, again, there are the Bananas, a plant of which has been figured in these pages bearing the enormous crop of 100lbs, or 256 "fingers." These are small plants in small pots, and a great deal of space is certainly not necessary for the successful culture of this nutritious fruit. In what I will call Vinery No. 2, there are seventeen varieties of Grapes; yet the crops are highly satisfactory, and the Vines in good condition. Diamond Jubilee Grape is being discarded because of its inferior flavour. It is a robust grower, however, and therefore may please some, and in "American Gardening" I notice that a man who has "studied" it for two years says he considers it one of the finest black Grapes ever introduced. Five years ago he inarched it on Canon Hall Muscat. There are four vineries, also Peach and Fig houses.

The greenhouse contained the usual class of plants, and I think there is room in many gardens for greater diversity, and the lists of plants tried at Kew, which the papers publish from time to time, ought to be of service in this respect. Francoas, Trachelium cœruleum, Humea elegans (silvery form), and Lilium speciosum among other things, were remarkably fine. In a top range the Zonal Pelargoniums were as fine a sight as a traveller could regale his visual sense upon, and the varieties are up to date. Probably Phœna is not well known, and I name it in case that be. It is of the Jacoby stamp, with enormous trusses. Ian Hamilton is another gem. And while the "Geraniums" are respected and treated as they deserve to be, the Gloxinias from Sutton's and Veitel's seed strains, are another pride of the Impney garden; and, thirdly, there is a most excellent collection of Cyclamens. The Gloxinias are sown in July, and wintered in small pots, which saves trouble in the spring. The Cyclamens, I should note, are plunged in ashes, in cold frames, and in July they were 6in to 8in across the foliage, so that ere the spring they will furnish grand plants. The new Coleus thyrsoides, and Kalanchoe Kirki are among the novelties doing well.

Lastly, one must note that sweet rosy-flowered plant Chironia

lingoides or ixifera, which was beginning to flower, and will continue for a long time. This is the pink flower used by Mr. Goodacre on his decorated dessert table at Shrewsbury this year, for which purpose it is excellently fitted. Mr. Jordan strikes cuttings in March; he grows them on until October, when the plants are given 4½ in pots. They are grown cool all winter, and are at the flowering stage by July.

The kitchen and hardy quarters are trim; though fruit in the Droitwich district, and all over Worcestershire, as elsewhere, is almost entirely absent this year. Mulching for both fruit and vegetables is largely (and heavily) practised, even the prize Onion bed having its dressing. Through the kitchen garden one is led to a most charming rosery full of decorative varieties, and a long line of the dwarf pink Gloire des Polyanthes was at once pleasing and telling. The Rose garden is, indeed, a very fine one, though

Sow the seed in shallow boxes or pans the first week in March, and place in a warm house to germinate. Prick off into boxes, or pot singly in small pots as soon as they can be handled, and keep in a warm house near the glass. Pot on into 54's when ready, and put them out into a cold frame; keep close for a few days, and thin gradually; harden them off.

Towards the end of June they will need a shift into 32's, and when they have recovered from the check received in potting stand them outside on ashes. Up to this stage the soil used for potting should be two parts loam and one of leaf soil, but at the next and final potting substitute dried cow manure for the leaf soil. The last potting into ten and twelve-inch pots should be done early in September, so that the plants will be well established ere the winter arrives.

During the winter the only protection they require is from



Indoor Fernery, Impney, Droitwich.

simple, being but two borders with a grass walk severing them. The planting and choice of varieties had been originally carefully accomplished. Thus end the notes of Mr. Corbett's fine garden, one of the best in a county of great gardens, second to no others in England.—J. H. D.

Campanula pyramidalis.

When preparing the seed-list for the ensuing year, do not omit to order a packet of seed of this charming plant. It is invaluable for filling in the gap which occurs in most places when the major part of the summer-flowering plants are over and before the Chrysanthemums come in. Formed into a group by themselves, or dotted in among other plants in the conservatory, they are equally effective.

the rains, and if a frame is available in which to place them, so much the better. Admit plenty of air, both at the top and the bottom—the latter by raising the frame on bricks—except during very cold weather. Remove the lights on all favourable occasions; in March they may be stood outside again.

As the season advances and the plants begin to take water freely, it is advisable to plunge the pots in ashes; for, if the plants are allowed to become dry very often, they soon begin to lose their foliage, and by the time they are in bloom are entirely devoid of leaves.

Campanulas, to bring them to perfection, require a great amount of feeding. Commence giving manure water as soon as the flower-spikes begin to appear; apply it weak at first, and then gradually increase the strength. Continue to afford the plants manure water alternately with clear water until the first flowers expand. This Campanula does equally as well planted out in the borders as it does in pots. Plant out in August, when the plants are well established in 32's; in March apply a top-dressing of cow manure.—G. R.



Bad Effect of Grass on Apple Trees.

In the third report of the Woburn Experimental Farm,* the compilers say: "As to the general effect produced by grass on young Apple trees, the results of the last few years have brought forward nothing which can in any way modify our previous conclusions as to the intensely deleterious nature of this effect, and we can only repeat, that no ordinary form of ill-treatment—including, even, the combination of bad planting, growth of weeds, and total neglect—is so harmful to the trees as growing grass round them. . . . The results of weighing some of these trees in 1898 showed that the grass-grown trees had not increased by more than about two-thirds of their original weight since they were planted in 1894, whilst their neighbours, which had been kept free from grass, had increased in weight from 10 to 13-fold. Judging by the appearance of the trees, we believe that a similar comparison at the present time would show a still greater difference. . . . Experiments have been devised to ascertain the cause of the action of grass on trees, and we may say at once that we have not yet succeeded in discovering this cause, although we believe that we have made considerable progress in the right direction, by reducing the possibilities of the case to within certain narrow limits. The evidence which we shall bring forward will, we believe, be sufficient to dispose of the views that the grass-effect is due to an interference with either the food supply, the water supply, or the air supply of the tree, and that it must, in all probability, be attributed to the action of some product, direct or indirect, of grass growth, which exercises an actively poisonous effect on the roots of the tree.

"The fact that numerous Apple orchards exist where the trees are flourishing in spite of being grass grown, forces us to conclude that grass is not seriously deleterious to Apple trees under all circumstances; and the one circumstance which naturally suggests itself as counteracting the evil effects of the grass, is the age of the trees. While discussing this subject in our second report (p. 173), we assumed, therefore, that the grassing-down of older trees might be effected without much injury, and, also, we suggested that certain of our results might be indicating that our trees, even then (1899), were beginning to recover from the effect of the grass (Second Report, p. 166).

"We have, however, now, no doubt but that such recovery as has occurred in our grass-grown trees, may be due simply to some of the roots having extended beyond the grassed area; whilst, on the other hand, experiments instituted to examine the effect of grassing-down trees of eight or nine years of age have proved that the action of the grass (at any rate, in our soil), is quite as deleterious to trees of this age as it is to younger ones, and we have received confirmation of our own experience from a practical fruit grower who has tried the experiment on still older trees. This will simplify the problem which we have to discuss at present, for, so far as our results have yet extended, the effect of grass on Apple trees is uniformly serious, independently of the age, variety, or root-stock of the tree.

"But, as recovery follows when the roots extend beyond the grassed area, it is probable that it will occur also, whenever the roots extend sufficiently far downwards to escape from the grass roots; and we must remember, therefore, that a tree may recover as it grows older, without implying that the effect of grass on its roots is different from the effect on the roots of younger trees: and this consideration will also lead us to conclude that trees might recover much faster in deep, rich soils, which favoured the extension of the roots downwards, than in shallow soils like ours, where a close subsoil of stiff clay tends to keep the roots very near the surface. Further, if recovery be brought about by the extension of the roots of the tree downwards, we should expect trees on the Crab stock to recover sooner than those on the Paradise."

Value of Very Early or Late Fruits.

Considering how the price of ordinary fruit doubles or trebles at the beginning or end of its season, the value of an early or late variety may be easily understood. An example of the value of cross-breeding fruits is to be seen in Peach Duchess of Cornwall. It has been known to ripen nearly a fortnight before any other British hothouse Peach. It is a cross between an early Peach and an early Nectarine, and is earlier than either of its parents.

Edible Fungi.

(Concluded from page 258.)

The following notes conclude our report of Dr. Cooke's lecture, delivered on September 15. The veteran scientist, in a letter on our "Readers' Views" page, names two useful publications for students.

Agaricus villaticus should rank as a species, but J. M. Berkeley only made it a variety of *A. campestris*. The cap is 9 in in diameter, and has a skin like the common Mushroom.

Twice or thrice Dr. Cooke had received specimens, and each had come from coal-cellars: it is always associated with coal, which is significant. The Horse Mushroom is found in rings, in meadows; moreover, it is cultivated for ketchup. It is a well-marked form, and is widely distributed. The Bleeding Mushroom (see page 258) was first found in Hungary some years ago. The St. George's, or May Mushroom, so called because it makes its appearance about St. George's Day, has a distinctly strong odour. It grows in rings or parts of rings. The flavour bears some resemblance to that of the common *Agaricus*.

The Blue Caps (*Tricholoma nuda*) are found amongst decayed leaves in woods. They are three or four inches in diameter, and sometimes even five or six inches. They are of a bluish-purple colour, and make good eating, being best when cooked young.

The Dusky Caps (*Clitocybe nebularis*) attain considerable size, are of a cloudy-grey colour, with darker centres. They are found in December, and the flesh is thick and firm. This species is gregarious.

The Parasol Mushroom (*Lepiota procera*) has a cap of a dirty-white colour, borne on stems eight to twelve inches long, and only half an inch in thickness.

The Shaggy Caps (*Coprinus comatus*) is one of a very few black-spored *Agaricini* that are fit for food. It comes up freely in waste spaces, by roadsides, or amongst the rubble left around building sites. It is sometimes cultivated; and it should be cooked as soon as gathered.

Then the lecturer named the Chantarelle (*Cantharellus cibarius*), which is a brilliant golden-yellow fungus, one of the commonest, but, according to the Doctor, it has been praised far beyond its merits. However, "it may on occasion arrest the pangs of death." The top of the pileus is depressed, or crater-formed. These growths are to be found in woods in September and October, and for a surety in the New Forest and Epping Forest. It is considerably used in Paris.

The next little subject, the white-spored Fairy-ring Champignon (*Marasmius oreades*), has a great reputation, both at home and abroad. (In France, by-the-by, all *Agarics* are called Champignons.) Its stems are white and slender, the cap about one inch across, convex at first, but flat later; and it has creamy white gills. As a product, it can be dried and kept for winter use, as is invariably done on the Continent, and is employed in soups. By placing the dried caps in water, it soon assumes its original shape. Its habitats are widely placed, and it is common in Siberia and in Borneo.

Coming to the edible *Boletus*, Dr. Cooke said it possesses the external appearance of the typical *Agaricus*, but the minutiae of the gills and under surface differ. It is common in woods, and forms an article of commerce in Soho (London), and likely enough elsewhere. The flavour is like that of the common Mushroom. *B. scaber*, the rough-legged *Boletus*, has a quality much the same as that of *B. edulis*.

The Morellas, or Morels (*Ascomycetes*), are not so much esteemed in this country as in France, Paris particularly, though one sometimes sees them offered in Covent Garden Market; and can be purchased by the pound weight, for flavouring soups. In the British Islands there are five or six indigenous species. They are not "*Agarics*," but are closely related to that genus. Unfortunately, no methods have been found whereby they can be cultivated. In their natural state they are found from April to June on chalky or clayey soil, Smith's Morel attains one foot in height and seven inches in diameter. It is of a warm tawny colour.

The Helvellas are found in our woods, but much scattered in numbers. Where found, however, they can be gathered and hung up to dry. While the Morels all appear in spring, the Helvellas are autumnal. Dr. Cooke stated that in one afternoon's foray during this year his party collected no fewer than fifty species.

Lastly, the lecturer named the Great Puff Ball (*Lycoperdon bovista*), which, he said, was a phenomenon by itself. It is often as large or larger than a man's head. It has no gills, the spore-bearing mass being inside. The flesh is moist, juicy, and firm. It can be sliced a quarter of an inch thick, like a Turnip, fried in butter, and served hot, with spices. In olden days it was used as a dressing for wounds. It occasionally grows in gardens, singly, or two or three together. The full text of the lecture (doubtless with some illustrations) will be published in the Journal of the Royal Horticultural Society.

It has frequently been remarked that while certain kinds of Fungi appear every year in the same locality, others are ex-

* Woburn Experimental Fruit Farm. Third report by the Duke of Bedford, K.G., and Spencer U. Pickering, F.R.S. 1903. Eyre and Spottiswood. Price 1s. 6d.

tremely capricious as to the time of their occurrence and the number of specimens produced. A single specimen, for instance, of *Paxillus paradoxus*, an Hungarian species, occurred last year, one in the west of England and the other in Kent, and in both instances was perfectly new to the British mycologist. The genus *Sprassis* was utterly unknown in this country till lately, but has now turned up in more than one locality. The White Truffle of Sowerby is a remarkable instance of the excessive scarcity of a particular species. From the time when it was figured by Sowerby a single specimen only occurred to Mr. Currey at Blackheath; Cooke found one also, and it has occurred in Herefordshire, and we have heard that it has lately been found under Oaks at Windsor—a species, it may be remarked, which has never been found by Messrs. Tulasne in their numerous researches, though it was not unknown to Vittadini. Corda appears to be the only one who has hitherto met with it in abundance, and excellent figures are given from his pencil in Krombholz grand volume. It was, therefore, with peculiar pleasure, during an excursion to the very interesting grounds of Rockingham Castle in Northamptonshire, that fine specimens of this rare plant were given to us by the excellent gardener Mr. Brown, who has found it more than once under Oak trees, not truly subterranean, but just peeping out of the ground, as is sometimes the case with the common Truffle, as in Somersetshire, where we have seen it cut in half in mowing the lawns.

The White Truffle appears to be very common in Bohemia, where it occurs in shady woods, and is much valued on account of its delicate flavour. It is too rare in this country to make it of much importance.—M. J. B. (in *Journal of Horticulture*, August 3, 1876.)

Sir William Jackson Hooker.

There is a strikingly interesting biographical sketch in vol. xvi. of the "Annals of Botany" dealing with the life of a very eminent man of great individuality, whose history is one with that of the progress of botany in the most important period of last century, to whose force of character, indeed, we owe an entirely new development which gave to this country a pre-eminence which it still enjoys—very largely increased and augmented by the author himself.

The names of men who did good work can easily be recalled, but the modern developments of systematic and economic botany were to centre at Kew, and Sir William Hooker it was who laid the foundations and earlier courses of the present world-famed edifice. He founded the Herbarium, the Library, the Museums, and the Gardens, practically as they are to-day. The three chapters of this sketch cover three periods: Norwich and Halesworth, 1785-1820; Glasgow, 1820-1840; West Park and Kew, 1841-1865; and after them are extensive appendices, to be enumerated at the end of these abstracts. The following selection must be taken as omitting as much or more of equal interest.

I. NORWICH AND HALESWORTH, 1785-1820.

"William Jackson Hooker was born in St. Saviour's parish, Norwich, on July 6, 1785. He was the younger of two sons, the only children of Joseph and Lydia Hooker, of that city. His father was a native of Exeter, the home of many generations of the Devonshire Hookers, where he had been a confidential clerk in the house of Baring Brothers, woolstaplers, with whose family his was distantly connected. From Exeter he went to Norwich, and into business there, where he had a collection of 'Succulents,' the cultivation of which class of plants was a favourite pursuit of many of his fellow-citizens. He was mainly a self-educated man, and a fair German scholar. My father's mother was a daughter of James Vincent, Esq., of Norwich, a worsted manufacturer, grandfather of George Vincent, one of the best of the Norwich School of artists, and whose works are now much sought for. Thus my father presumably derived his love of plants from his father's side, and his artistic powers from his mother's."

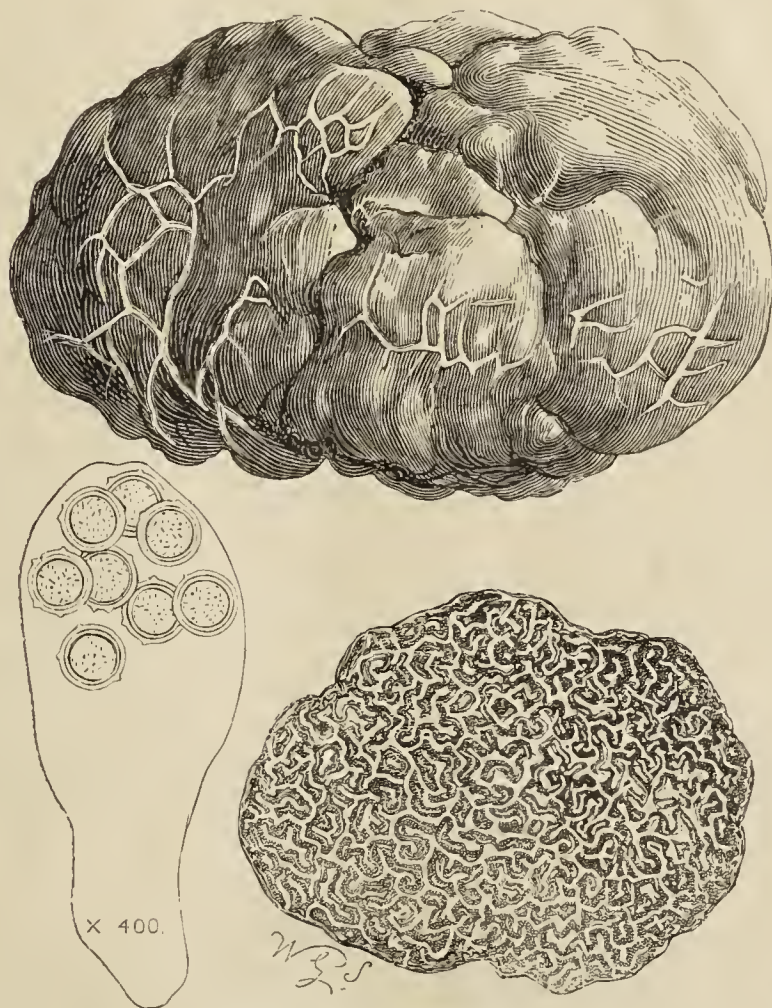
"When only four years old he inherited the reversion to a fair competency in landed and personal property in Kent, through the death of his cousin and godfather, William Jackson, Esq., of Canterbury, a young man of great promise. After leaving school he was sent to reside with a Mr. Paul, of Starston (a village on the borders of Suffolk), a gentleman farmer, who instructed sons of the landed gentry in the management of estates. Early in life he devoted himself to ornithology, visiting the Broads and sea-coasts of Norfolk, which abounded in rare birds, shooting, stuffing, and drawing them, besides learning their habits and songs.

"Sixty years later he knew the birds in Kew Gardens by the eye and the ear, and in a manner which surprised me. Though a keen ornithologist, and as keen an entomologist, he was almost

morbidly averse from taking life; he never shot for sport or for the pot; and many years afterwards, when instructing me in entomology, he was ever urging me to kill with the least suffering, and never to take more specimens than were necessary. His was one of those temperaments that later in life could not look on blood without a feeling of faintness, or on a wax model of the human face with equanimity."

Sir William was born a student of natural history, and botany may not have been his first love. We read: "That his entomological pursuits were, when still in his teens, appreciated by the veteran Kirby is evidenced by the latter having in 1805 dedicated to him and his brother a species of *Apion* with these words: 'I am indebted to an excellent naturalist, Mr. W. J. Hooker, of Norwich, who first discovered it, for this species. Many other nondescripts have been taken by him and his brother, Mr. J. Hooker, and I name this insect after them, as a memorial of my sense of their ability and exertions in the service of my favourite department of natural history.'

"I do not know the age at which my father took up botany. The first evidence of his having done so is the fact that he was the discoverer in Britain in 1805 of a very curious Moss, *Bux-*



The White Truffle.

baumia aphylla; but it may be inferred from this and from his correspondence with Mr. Turner (which I possess) that he had at the age of twenty-one thoroughly studied not only the flowering plants but the Mosses, Hepaticæ, Lichens, and freshwater Algæ of Norfolk. The *Buxbaumia* he took to his friend, Dr. (afterwards Sir James) Smith, of Norwich, the possessor of the Linnean herbarium, who advised him to send specimens to Mr. Dawson Turner, F.R.S., of Great Yarmouth, author of 'Museologia Hibernica Spicilegium,' and, with L. W. Dillwyn, F.L.S., of 'The Botanist's Guide through England and Wales.' This he did, and it was immediately followed by an invitation from Mr. Turner to visit him, which led to the colouring of his future life.

"In 1806, when only four months over his majority, my father was elected a Fellow of the Linnean Society, probably the youngest individual so honoured. In the same year he visited London, and was introduced to Sir Joseph Banks, König, Brown, and other naturalists. The years 1806-9 were passed between Norwich, Yarmouth, and London, with intervals of travelling in Scotland and Iceland. . . . In 1807, when botanising in the neighbourhood of Yarmouth, he was bitten by a viper. Fancying he had been pricked by a thorn he paid no heed to the pain, till giddiness came on, under which he succumbed. After lying for some time in a state of collapse he was accidentally found by some friends who carried him to Mr. Turner's, where violent fever supervened, followed by tedious illness. On recovery he started with Mr. and Mrs. Turner on a botanical tour in Scotland. . . .

(To be continued.)



Lettuces at the Drill Hall.

Referring to your report of our exhibit of Lettuces at the Drill Hall on Tuesday, September 15, your paragraph stating that "These Lettuces were all sown on May 30, and dibbled into beds 5ft by 4ft," should have read: "These Lettuces were all sown on May 30, in beds 15ft by 2ft, drilled 12in between the rows."—DICKSON AND ROBINSON, Manchester.

Hedges for Ornament, Shelter, and Profit.

Notwithstanding the fact of depredations even amongst fenced-in orchard crops, we still think fruit-tree hedges are possible in some parts. In its proper place we answer the following letter, which, however, for the subject it introduces, deserves the prominence we give it. Our querist writes:—"Now that we are hard driven to make the land pay, I shall be glad if you will tell me, in your 'Answers to Correspondents,' what hedge I can plant to pay me best. I want a quick-growing hedge for shelter, and the situation is an exposed one. I have thought of Cob Nuts, Fairleigh Damsons, and Cherries. Which of these do well in this part (St. Albans) of Herts? I do not see why our hedges should yield nothing.—E. R."

Edible Fungi—Potato Disease.

Whilst thanking you for your courtesy in sending me a copy of the Journal for 17th inst., it is but justice to congratulate you on the report of the Fungus Show and Lecture at the R.H.S. meeting as one of the best, if not *the* best, of the many which have come under my notice; and I shall look out for the continuation. I may observe in reference to the last paragraph, that "British Edible Fungi," with twelve coloured plates of over forty species, is published by Kegan Paul, Trench and Co., and "Edible and Poisonous Mushrooms," with eighteen coloured plates of forty-eight species, by the Society for the Promotion of Christian Knowledge, at half-a-crown.

I have noted the remarks of "R. H. S.," page 264, on "Potato Disease," and shall take the first opportunity of publicly stating my opinion on the subject. My experience accords with that of the writer.—M. C. COOKE.

Transplanting Large Trees.

I have had some experience in transplanting large trees, on one occasion planting about seventy Elms of from six to fourteen inches in diameter. About half of the number were frozen balls of roots. The remainder were dug after the frost left the ground with as long roots as possible, the roots being followed, and after digging being bagged and kept moist. The latter method is the better of the two, and is the one adopted by O. C. Simonds with the large Elms transplanted into Graceland cemetery, Chicago, of which Mr. Olmstead speaks. In the case I refer to, roots often twenty feet long were procured, and the trees planted in clumps on the surface of well prepared ground. The roots were carefully laid out, the trees guyed, and loam wheeled in to cover. Not one tree so treated was lost; on the contrary, all grew well. This work was done under the best possible conditions, the trees being selected in summer from open pasture lands, carefully dug, the roots kept moist, and carefully planted and mulched.

The trees dug with frozen balls did not compare nearly so favourably in results. About 10 per cent. died within three years, and a large percentage showed, in five years, their inability to recover from the murderous treatment of the roots at digging, the balls being dug from 6ft to 8ft in diameter.

Now while such good results may be had in transplanting Elms, Willows, or soft Maples, there are no other trees, in my experience, from which as good results might be expected. I have seen hundreds of thousands of dollars spent in the planting of large trees in Chicago, and, I think, nearly all wasted. The same amount of money spent in the proper preparation of the ground, with the planting of young nursery stock, would have been infinitely better.

There are times when the horticulturist has to do violence to his better judgment; and in such case, in the transplanting of large trees, I would recommend the getting of all roots possible; never mind the ball of earth if you can get roots and keep them

moist. Thin out a portion of the branches, but do it without seeming to have done it. Thoroughly prepare the bed for the tree; and, I ought to add, only attempt it with the trees I have previously enumerated, with the possible inclusion of red and hard Maples.

Conifers of 15ft or 20ft in height are no little things to transplant. As to what trees it is better to transplant in fall and which in spring, I have found it best to leave Oaks, Beeches, Magnolias, Tulips, Thorns, and Cornus florida for spring planting.—J. A. PETTIGREW, New England Park Superintendent.

The Country Show.

The unfavourable season for bedding and flowering plants in general has naturally left its mark on the country flower shows. Moreover, the difficulties to be overcome only make exhibitors all the more eager to display their products. Some people urge the amalgamation of small country shows, but it is to be hoped that the day when the small country show will be a thing of the past is far distant. The local show is an event of the year, and it gives encouragement to small farmers and cottagers to grow the best.—S. D. N.

Recipe for Elderberry Syrup or Wine.

In reply to "W. A.," page 265: Take any quantity of ripe berries; strip roughly from stalks, put into a stew-pan or enamelled saucepan; place by side of fire until all the juice is extracted; strain through muslin and put juice into clean pan; and to each pint add 1½lb preserving sugar, some bruised cloves, and root ginger, tied in muslin: these should be added according to taste. Boil about half an hour (or, if the quantity is large, until it thickens), stirring well. When done, bottle it. About two tablespoons to a tumbler of hot water, and a little grated nutmeg, makes a delicious drink.—(Mrs.) E. MARLOW, Greenwich Park.

Recipe for Marrow Jam.

Seeing your invitation to readers to send receipt of Vegetable Marrow jam, I am sending my wife's. Nearly all the ladies ask for the receipt when they have tasted, and I can say it is very good: "1lb of sugar to each pound of Marrows; two lemons and ½lb of ginger to 5lb of Marrows. Cut the Marrow into squares an inch thick; put them into a pan and stew part of the sugar over them. The following day pour off the juice and add the ginger. Let it boil well, then add the Marrow, lemon juice and remaining sugar; boil until it sets, then take out the ginger and put the jam into jars. The Marrows ought to be ripe.—W. BYGRAVE, 22, Blatherwycke, Wansford, Northants.

In answer to query on Vegetable Marrow jam, I have made it for years in the following way, and it has always turned out well: Take the Marrows after they have been cut for a month; peel them, taking out all seeds; cut them up into 2in squares, and to every pound of Marrows put 6oz of best loaf sugar. Peel off half a lemon, and take its juice, add a good grating of nutmeg, also a piece of whole ginger. The lemon peel must be cut very fine, without any of the white on it. When the jam has boiled fast for one hour and a quarter, take it off, and take the ginger out. This jam must boil quickly, and be kept stirred all the time. P.S.—On no account put more than 6oz of sugar to the pound.—Mrs. PIKE, Melton Mowbray. [Is it not better to boil slowly?—Ed.]

I send you herewith a receipt for Vegetable Marrow jam which I have found most excellent. Take Vegetable Marrow which is too old for use as a vegetable, but not quite ripe. Cut it up in blocks about 1in cube; remove the seeds and the outer skin. Of this, place 7lb in preserving pan, and with it two lemons sliced right through, and very thin (with the pips removed), and over all put 7lb of best preserving sugar, and allow the whole to stand in a cool place for at least twenty-four hours. After this put in 2oz of crushed dried ginger in a muslin bag; and boil the whole slowly till it is quite clear, and the Marrow quite soft; it will take about four hours. The bag of ginger may be removed when the whole is nicely flavoured. No water need be added.—A. H. WILLIAMS.

In answer to "E. C. C. D.," page 265: Peel and remove seeds from Marrow (which should be thoroughly ripe); cut into 1in pieces, and put into large vessel, and let stand for twelve hours. To each pound of Marrow add 1lb preserving sugar, and to every 5lb Marrow, the rind of three lemons, cut very thin, and about ½lb bruised ginger, tied in muslin. Boil until the Marrow is transparent; pot, and tie down while hot, which prevents the jam from crystallising. The lemon rind can be omitted if desired. I have always found this jam most delicious, and I should be pleased to forward a recipe for Marrow pickle if cared for. [By all means.—Ed.]—(Mrs.) E. MARLOW, Greenwich Park.

Pointers for the National Dahlia Society.

The following letter has been laid before the Committee of the National Dahlia Society:—

During this my first year as secretary of the National Dahlia Society, I have been considerably impressed by the fact that whereas the number of applications for schedules from non-members since January has reached thirty-five, in only four cases have the applicants subsequently joined the society, and in looking through the list of applications received by Mr. J. F. Hudson in 1902 and the preceding years, I find the proportion to have been even less than this. The above fact suggests two reflections to my mind: firstly, that these persons are Dahlia growers, and are inclined to become members in order to exhibit at our shows; secondly, that having seen our schedule they do not consider the prizes sufficiently tempting.

There is without doubt a large field for recruiting amongst gentlemen's gardeners and amateurs of the industrial and trade class, who grow a limited number of plants; but these will not join unless the prize money offered is sufficient to cover the expense of getting to, and returning from, the show. I therefore wish to propose at the next meeting of the committee, that certain classes at present included in the schedule be abolished, and that the prize money, plus something in addition which, I think, we shall be warranted in offering, be transferred to other and more popular classes. To enable you to arrive at which classes can best be dispensed with, and which are the most deserving of additional prize money, I append a list of the entries for 1902 and 1903. The figures of previous years are not available, as the Crystal Palace Company kept the entries. [Here follow figures which we have omitted.—Ed.]

What I should like to propose is that Classes 5, 16, 17, and 21 be abolished, and that Class 19 be for "Twelve Show and Fancy Dahlias," instead of "Twelve Fancy Dahlias" as at present. This would release £10 2s. 6d. of prize money, to which I propose to add the sum of £5 2s. from the increased revenue of the society, making a total of £15 4s. 6d., which I suggest should be spread over classes in the Show and Fancy, and Cactus sections for amateurs [which are named in letter.—Ed.]

In recommending the deletion of three classes from the Show and Fancy section it must be pointed out that even then this section will have more than its share of the total prize money offered, as shown by the following figures:—

	Number of Classes.	Total Prize Money Offered.	Total Entries, average of, 1902-03.	Prize Money per class.	Prize Money per Entry
Show and Fancy ..	12 ..	£ 28 10 0	40½ ..	£ 2 7 6	.. 14 1
Cactus, including Decorative classes..	16 ..	£ 35 15 6	98½ ..	£ 2 4 8	.. 7 3
Pompon ..	5 ..	£ 10 0 0	24 ..	£ 2 0 0	.. 8 4
Single ..	6 ..	£ 10 0 0	17 ..	£ 1 13 4	.. 11 9

NEW SCHEDULE AS PROPOSED.

Show and Fancy ..	9 ..	£ 27 5 0	40½ ..	£ 2 19 8	.. 13 5
Cactus ..	16 ..	£ 42 2 6	98½ ..	£ 2 12 8	.. 8 6
Pompon ..	5 ..	£ 10 0 0	24 ..	£ 2 0 0	.. 8 4
Single ..	6 ..	£ 10 0 0	17 ..	£ 1 13 4	.. 11 9

As I ventured to predict last year, when the new Class 21 was put in, this class has proved to be beyond the capacity of our amateurs, the one exhibit staged being of inferior quality, with the blooms tied together like an ordinary market bunch. I have suggested the addition of a fourth class for amateurs, "who have never won a prize," &c., and the raising of the prizes in this section to the level of similar classes in the general amateur section. My reason is that the entries prove this section to be the chief attraction to new members, and as our main object is to increase the membership, it seems doubtful policy to treat the new comers as inferiors by offering them prizes of considerably less value than we give for exactly similar exhibits in the old classes.

The net income of the society for this year promises to show a surplus balance of not less than £15, and probably of £20. Should the sale of advertisements in the new official catalogue realise the same sum as on the last occasion, namely £12 10s., the cost of the catalogue will be about met out of this year's income without reckoning on the proceeds of sale of copies to non-members, which on the last occasion came to £4 10s. Assuming, then, that we start next year with the official catalogue paid for, and with an evenly balanced account, as compared with a balance of £4 16s. 8d. at the end of last year, and that next year we make no progress, but obtain the same income as during the present year—our surplus at the end of 1904 would be about £15, so that I think we should be justified in taking £5 2s. out of this for additions to prizes. I much regret being unable to suggest better prizes in the open classes, but am sure that our professional supporters, who have been so generous to the society in the past, will cheerfully forego any addition to prizes in this section at present if they are of opinion that the above suggestions are in the true interest of the society.—P. W. TULLOCH, Sterndale, New Church Road, Hove, September, 1903.

NOTES

NOTICES

Oxfordshire County Council Horticultural Students' Association

At a meeting of the above association held at St. John's College, Oxford, on Saturday, September 19, at 3 p.m., Mr. P. Elford, M.A., County Education Secretary, read a paper on "Nitrogen-forming Organisms," illustrated by lantern slides. This association is formed for the purpose of continuing the studies in horticulture and botany of those who have obtained the R.H.S. certificate through the County Council classes.—S. H., Hort. Instr.

Orchid Sold for the R.H.S. Hall.

Possibly most of our readers noticed in last week's report of the R.H.S. meeting, that the *Zygopetalum* which received a first-class certificate, was to be sold, and the proceeds were to go to the building fund of the Society. We are informed that it (*Zygopetalum Rœblingianum*) was sold at Messrs. Protheroe and Morris's rooms for fifty guineas, Sir Frederick Wigan, Bart., being the purchaser, the auctioneers foregoing their commission. This *Zygopetalum* is a new hybrid raised by Mr. H. T. Clinka-berry in the gardens of C. G. Rœbling, Esq., of Trenton.

The Testimonial to Mr. W. B. Latham.

At a general meeting of subscribers held at the Athletic Institute, John Bright Street, Birmingham, on September 14, after consideration it was decided that it was advisable to postpone the dinner from September 24 (as originally fixed) to October 22, in order that Mr. Latham's many friends at a distance may have an opportunity of showing their appreciation of his many kindnesses and life-long service to horticulture. We learn that Mr. Owen Thomas (late head gardener to His Majesty) and now of 25, Waldeek Road, West Ealing, W., has kindly promised to preside at the dinner and present the testimonial, and he will be glad to receive subscriptions, or they may be sent to the Secretary, Mr. J. Hughes, 140, High St., Harborne, Birmingham.

County School of Gardening, Pymmes Park, Edmonton.

It is proposed to form a Gardeners' Mutual Improvement Society, and a meeting for this purpose will be held on Monday, September 28, in the Garden Library, Pymmes Park, Edmonton, at 8 p.m. The gardeners of Edmonton and the surrounding district are invited to attend this preliminary meeting with a view to arranging the details. The Middlesex Education Committee have kindly placed the garden library at the disposal of the proposed society; and the valuable collection of gardening and botanical books may also be utilised for the purpose of reference. Meetings will be held once a week, at which papers dealing with some branch of gardening will be read and discussed. Gardeners in the neighbourhood who are willing to join the society, or to read papers, are invited to communicate with Mr. J. Weathers, Pymmes Park, Edmonton.

Fruit and Vegetable Show at Chiswick.

The Royal Horticultural Society will hold an Exhibition of British grown fruits and vegetables in their gardens at Chiswick on September 29, 30, and October 1. A Conference on Vegetables will be held on Tuesday, September 29, at 2.30 p.m., Mr. George Bunyard, V.M.H., in the chair. The following gentlemen have been asked to read papers:—1, "On Cooking Vegetables," Dr. Bonavia and Mr. James Hudson, V.M.H.; 2, "On Vegetables all the Year Round for a Private Family," Mr. W. H. Divers; 3, "On Vegetables for Exhibition," Mr. Edwin Beckett; 4, "On Vegetables for Market," Mr. W. Poupert. The exhibition will open at 12 noon, on September 29, and at 10 a.m. on the two following days, closing at 6 p.m. Fellows of the Society, on showing their tickets at the entrance, will be admitted free, and the public on payment of 2s. 6d. on the first day, and 1s. on the second and third day. At a general meeting of the Royal Horticultural Society, held on Tuesday, September 15, twenty-four new Fellows were elected, making a total of 1,141 elected since the beginning of the present year.

Our next issue will contain a full report of the gardeners' dinner and of the show.

Appointment.

Mr. G. Pike, as head gardener at Craven Lodge, Melton Mowbray.

Potatoes above Ground.

A singular freak of Nature has been grown by Mr. W. Meek, at Gayton, King's Lynn. Instead of bearing tubers at the roots, several Potato plants have grown the tubers on the stems above ground, like Gooseberries. On one plant alone between fifty and sixty tubers developed into a good size.

Garden City Pioneer Company, Limited.

The prospectus of the First Garden City, Limited, is, at present, only being issued to the shareholders of the Pioneer Company, members of the Garden City Association, and those who have shown some interest in the movement. On October 9 and 10 there will be a public inspection of the site, which is at Hitchin, thirty-four miles from London, and embraces 3,8000 acres.

Purification of the River Seine.

Someone has sent a marked copy of "Le Patriote," August 27, containing particulars of a scheme for purifying the Seine on its course through the Brabant communes, in the province of Anvers. It would seem that the river is somewhat malarial and dangerous to the public health. The purification system being attempted is the employment of "Pompes Elévatoires"—elevating pumps which, by means of a rotary wheel, carry up the water to suitable reservoirs, where the sewage (substances noëives en suspension) is held and the purified water escapes. The residue is subsequently conveyed away, and seems likely to be used as fertilising material for market-gardens around Paris and elsewhere.

Croydon Gardeners' Society.

Cryptogamic plants formed the subject of a lecture delivered before the members of this society at their rooms, Sunflower Temperance Hotel, on September 15. The lecturer was Mr. G. W. Shrubshall. The exhibits at the meeting also proved very attractive, and unanimous thanks were freely expressed to the exhibitors. Mr. A. Edwards, Ambleside Gardens, brought a good collection of Apples; Mr. E. Kromer, Brandon Hill Nurseries, bringing a flowering specimen of *Watsonia humilis*; Mr. J. Gregory, a flower of *Cereus triangularis*; Mr. A. C. Roffey, Croydon, Cucumbers, saved for seed purposes; and Mr. M. E. Mills, Coombe House Gardens, who brought varieties of Fern fronds and splendidly grown Dahlia blooms. The next paper will be by Mr. J. Cheal, Crawley, on October 6, when "Horticulture in America and Canada" will be his subject.

The Gardeners' Dinner.

Kindly permit me to make a final remark for the benefit of all attending our great reception dinner at the Holborn Restaurant on the 29th inst., that of the seating arrangement is in the hands of a small committee, of which Mr. Jaques, of Pound Street, Wendover, is chairman, and to whom all requests for small parties of three or four to sit together will be handed. The chairman's or long table will be reserved for distinguished visitors and speakers, with the exception of those who may prefer to sit with the vice-chairmen at the ends of the cross tables. A large plan of the tables will be hung in the reception room, and on which all engaged seats will be written so far as is possible. That is, of course, not a matter to be left to the last moment. Others making up their little parties in the reception hall (a large room) can thus arrange to sit together. Small parties are best arranged. There are large cloak rooms near the entrance to the restaurant. This, it is important to note, is in Newton Street, on the left-hand side from Holborn. Newton Street is exactly opposite the British Museum Station of the Tube railway.

Ticket-holders will have their dinner tickets collected at the tables. All are respectfully invited to hand in their name cards, filled up, at the door of the reception room. Ticket members have nothing to do with the seating arrangements. All speeches, it is urgently desired, should be short. The function is to be a social one. There is a long programme to get through. Any tickets yet unpaid should be settled for at once, any not sold should be returned. No one should leave getting a ticket till the last moment. They are going fast. Every effort will be made to render the function pleasant and enjoyable. Dinner will be kept waiting for no one.—A. DEAN.

The Horticultural Directory.

The editor begs to remind nurserymen, seedsmen, and more particularly head gardeners, that additions and corrections for the 1904 edition of the "Horticultural Directory" must be received at the office, 12, Mitre Court Chambers, Fleet Street, London, not later than October 5, to ensure insertion.

The American Florists' Convention.

The nineteenth annual meeting of the Society of American Florists has just been held at Milwaukee, and was in every way a pronounced success. The exhibition made a very fine appearance and compared favourably with the best ever held under the auspices of the society. At the meeting much good work was accomplished in every department, and the society is keeping well abreast of similar institutions in other lines of industry. The recent programme included papers on many important subjects.

Prescot Dahlia Society.

The third show in connection with the above society was held at Prescot on Saturday last, being most successful from every point of view. It is in no way connected with the Prescot Horticultural Society, who always hold their show too early to see the Dahlia at its best, but is managed entirely by a committee of workers, who spare no efforts to bring out the best possible results, the classes numbering thirty-four. The flowers of both Show and Cactus varieties had benefited greatly by the weather of the past few days, and many fine blooms were staged, Messrs. J. Lawton and R. Ball securing the awards for Show classes; and Mr. W. Rigby both classes for Cactus. The single specimen bloom classes were won by Messrs. Lawton, Rigby, and Cropper. Although the Dahlias formed a great attraction, there were other classes devoted to flowers in season and vegetables, Mr. W. Rigby scoring with Asters, Marigolds, and collection of cut flowers. Mr. W. Cropper had the best French and Runner Beans, and Mr. Peet Onions and Tomatoes. The Celery was magnificent, Messrs. J. Crawley and W. Cropper taking the lead. There were many special prizes offered, the contributors being Mr. and Mrs. Lyon and Messrs. Mee, Rogers, Seddon, Hatton, Baker, Ellis, Rainford, and Peet. Mr. J. Waine is a persevering secretary, and Messrs. J. Appleton and S. Waine are deserving of credit for their staging.—R. P. R.

Reading Gardeners' Association.

The last two gatherings of the members of this association were of a most enjoyable character, visits being paid to Danesfield, Marlow, by permission of Mr. R. H. Hudson, and to Hillside, Reading, by invitation of the President. The outing to the former place was by steamer, and the party numbered about sixty. Arriving at Medmenham, the visitors were met by Mr. J. Gibson, the head gardener, and conducted across the meadows to the Polo Ground, where lunch was partaken of. The president, Mr. Leonard Sutton, presided, and, on behalf of the members, tendered to Mr. Hudson their thanks for allowing them to visit Danesfield for the second time. After lunch, the party first inspected the kitchen garden, and, needless to say, great interest was manifested in the various crops of vegetables, specimens from which have made the name of Danesfield famous in horticultural circles throughout England and Scotland during the present year. A stroll through the grounds and a game of cricket made the remainder of the day pass pleasantly.

The visit to Hillside took place on the 14th inst., and was the first meeting of the present session. Previous to the meeting over 100 members sat down to a substantial tea, afterwards making an inspection of the garden. The subject for the evening's discussion was "Notes on a Recent Visit to the Gardens at Bear Wood," questions on the culture of crops seen to be answered by the head gardener, Mr. W. Barnes. This proved to be a very interesting evening. Those taking part in the debate were the president, Messrs. Powell, Fry, Exler, Judd, Burfit, Tunbridge, Challis, Hinton, D. Dore, E. J. Dore, Lever, and Alexander. The subjects touched upon were Strawberries, Begonias, Peas, Melons, Carnations, Vines, Peaches, Cauliflower, Potato, Sea Kale, Onions, Lily of the Valley, Beans, Celery, Solanums, Soils, &c. Before separating, a hearty vote of thanks was accorded to the president for his kind hospitality, and to Mr. Barnes for leading the meeting. Several new members were elected.

The Royal Horticultural Society.

Scientific Committee, Sept. 15th.

Present: Mr. Michael (in the chair); Messrs. Odell, Chattenden, and Worsley, Professor Boulger, Revs. W. Wilks and Geo. Henslow, hon. sec.

Silver leaf disease.—With reference to the report in the minutes of the last meeting, Professor Gant wrote as follows: "I notice in this morning's 'Gardeners' Chronicle,' p. 196, a slight error. It is this, 'Silver leaf was due to a lack of nitrogen in the soil.' It should have been 'presence of too much.' I was quoting Dr. Massee. Mr. Bland, the owner of the fruit trees affected, before he wrote to me, sent some leaves to the Board of Agriculture, who sent them on to Dr. Massee. The following is a copy of the report: 'Copy A, 3350.—Diseased Plum trees.—The disease is generally known as silver leaf, and has been proved to be due to the presence of too much nitrogenous food in the soil. Abstain from using farmyard or organic manure of any kind, and sow rape or some quickly growing crop under the trees. Remove the crop when fully grown.'" Much hesitation was shown by the Committee in accepting this conclusion, as Portugal Laurels growing in poor, gravelly soil have been known to be badly affected, as much as garden fruit trees.

Asparagus diseased.—Herr Otto Froebel, Zurich V., sent the following communication, with specimens: "Dear Sir,—Permit me to send you to-day by post a monstrosity I observed since last year on my old plant of *Asparagus retrofractus*. We call such form 'Hexenbesen,' which means 'Witch's broom.' They are often observed on different hardy plants, on Conifers, trees, and shrubs. However, I have never observed this anomaly on any one of my various species of *Asparagus*, and I hope it will be interesting to the readers of the Journal of the R.H.S. if you will bring this notice." Mr. Michael undertook to examine the specimen. "I intend to send you next spring a flowering branch of the quite new *Forsythia europæa*, Deegen and Baldacci, introduced by seeds in 1899 from Albania. I should feel much satisfied if I could send first flowering branches of this new shrub, very hardy in my country, and if this novelty could be figured in your very fine and always most interesting Journal."

Chimonanthus, abnormal foliage.—Mr. Odell showed branches bearing normal as well as bifurcated leaves, arising from a separation of the fibro-vascular bundles of the midrib, at various distances from the base. In some it commenced even in the short petiole.

Eelworm in Agrostis.—Mr. Chattenden showed examples of the unusual position of eelworms in the inflorescence of this grass.

Ceoma in Campanula.—He also showed examples of this fungus in *C. rapunculoides*, as well as an apparently new species of fungus attacking the sepals of *Clematis*.

Dracæna with aerial root.—He also exhibited a stem which had been ringed producing a downward growing "toe," or adventitious root, upwards of a foot above the ground.

Heuchera, floriferus.—Mr. Wilks received a plant in foliage, on every leaf of which a foliaceous bud was developed at the base of the blade on the upper end of the petiole. There appeared to be no account of such being a normal condition.

Figs, drying and falling.—Mr. Worsley drew attention to the fact that certain Figs frequently ceased to mature after a certain time, then dried up and fell off. The general opinion was that nourishment was diverted by some cause or another, as the winter Figs always fall off as soon as foliage appears in this country.

Narcissus incomparabilis Gloria Mundi.

By the kindness of Messrs. Barr and Sons we are able to give an illustration on this page of a flower, almost natural size, of this gem of Daffodils. We would class this as one of the best half dozen, choosing from the whole tribe of Narcissi. Barri conspicuus, stella superba, and Gloria Mundi are an unsurpassed trio. The corona is glowing orange-red, and the perianth is a sweet soft yellow.

Hardy Flowers at Edinburgh Show.

As a supplement to the excellent report given by your representative at the Royal Caledonian Society's Show on September 9 and 10 a few special notes on the hardy flowers exhibited may be serviceable to the many growers of hardy flowers in the kingdom. It may be said, by way of preface, that the hardy herbaceous flowers were, as a whole, very good, but that there was a very small representation of new or rare plants, apart, of course, from the numerous varieties of florists' flowers, which can hardly be dealt with now, so numerous are the newer Phloxes, Pentstemons, Gladioli, and Carnations on exhibition. These were, as a whole, admirable, and the Pentstemons were exceedingly fine, presenting a great contrast to the small, narrow flowers which often found a place in prize stands of our early days.

Gladioli were superb, but the most of these are purely florists' flowers, and cannot receive notice, save, perhaps, the fine colour of the purple-blue flowers of the Lemoinei variety Baron J. Hulot



Narcissus incomparabilis Gloria Mundi.

Barr and Sons

in Messrs. Cocker's large exhibit, which had no competitors in its class. This has been "out" for a few years, but is seldom seen so fine. One must, however, also remark upon a splendid scarlet *Pentstemon* named Preston Hall, and raised in the garden there. It seems to partake much of the character of the now scarce but hardy Newberry Gem, but is much larger and more perfect in form. This should be a really good plant, and it is one, by the way, of which Mr. J. W. McHattie thinks highly, from having used it in Edinburgh public gardens.

As has already been remarked, new flowers were few, but one observed two lots of the double variety of *Gypsophila paniculata*, already familiar to frequenters of the Drill Hall exhibitions of the Royal Horticultural Society. This is, I believe, the first time it has been shown in Edinburgh. There were also two lots of the pinkish coloured *Astilbe sinensis*, but these were not very well coloured, and did not do justice to the plant. I do not think this has been shown in Edinburgh before. *Chrysanthemum maximum* King Edward is referred to below. Among the most noticeable of the other things one must place the magnificent spikes of *Eucomis punctata*, shown by Mr. Adam Brydon, of Innerleithen, in his first prize stand. I imagine that finer ones have never been shown. Though they came from under glass they may be regarded as examples of what may be done with this Orchid-like bulbous plant when cultivated as it might be. The secret appears to lie mainly in keeping the soil dry until the plants start, and then giving them frequent supplies of liquid manure. The same plant was shown elsewhere, but not nearly so well as the spikes shown by Mr. Brydon, who deserves every credit for his success.

Considering the season we have had, the *Kniphofias* shown by Messrs. Cunningham Fraser and Co., of Comely Bank, were very fine, the noble *Obélisque* and the lovely *Lemon Queen*, being among the best, though the older *corallina* deserves also a note to itself. *Eryngiums* were less seen than one expected, but I observed one or two good heads of *E. Zabeli*; while *E. Oliverianum* was also in several stands. *Echinops* were plentiful, and in some competitive stands they were rather unduly numerous in proportion. *Physostegia virginica* (*Dracocephalum virginianum*) was well done in some of the stands; and I observed some good pieces of *Chelone Lyoni* and *C. obliqua*. *Phygelius capensis* was seen several times, but not so well coloured as in my own locality, in the south-west of Scotland. Messrs. Laing and Mather, who seem to be making a new departure into alpine, had a nice plant or two of *Asteriscus maritimus*, a neat yellow plant one does not often come across, among some other alpine of more or less rarity.

Among the plants one expected to see more largely shown were the *Rudbeckias* and *Echinaceas*, of which few bunches were in evidence in the different stands; indeed, although represented, of course, such autumn composites as *Helianthus*, *Inulas*, and *Heleniums*, were not nearly so plentiful as might have been looked for. *Galtonia candicans* and *Liliums* were well shown, but the latter comprised nothing at all uncommon. There were only a few perennial *Asters*, it being early in the season for these, but there were some bunches of varieties of *Aster acris* and some of the *A. Amellus* forms, a good one, *Distinction*, being the best, perhaps, of those seen. The allied *Erigerons* were represented by *speciosum*, *glabellus*, *Coulteri*, &c. *Gaillardias* were pretty numerous, and *Lobelia cardinalis* was in several stands. There were several *Delphiniums*, but the most noteworthy were a pale blue double one, perfectly imbricated, named *Gloire de Nancy*, and a good bunch of the curiously coloured purplish blue *D. Brunonianum*, a plant which looks much better when cut and in a bunch than when in the garden. There were a few *Polygonums*, the best being a good bunch or two of *P. affine* or *Brunonis*. *Veronicas* were frequently shown, often in capital form, and it is evident that *V. longifolia sub-sessilis* still holds its own in the favour of exhibitors, though here and there one came across *V. l. rosea*, and there were one or two lots of *V. virginica*.

Chrysanthemums were largely utilised, but only such as *C. maximum* and its forms may be remarked upon now. Undoubtedly the finest thing of the kind there was *C. m. King Edward*, as shown by the raiser, Mr. W. Angus, Penicuik, and a truly noble flower of its class. *Campanulas*, as was to be expected at this time of the year, were not so fine as earlier in the season, but some good spikes of *C. persicifolia alba grandiflora*, and one or two others, were exhibited. Then there were several striking exhibits of *Alstroemerias*, and one observed some good lots of *Gentiana asclepiadea* and *G. a. alba*, with several lots of *Bocconia cordata*, though I failed to recognise any of the newer *Bocconias* sent out lately. *Galega officinalis* occurred here and there.

There were a great many bunches of *Montbretias* of the usual varieties, but by far the best was the fine *Germania*, which does not gain ground as it ought to do. One was disappointed to find so little variety among the bunches of *Anemone japonica*, the variety *alba* being best represented. Some of the newer French or German varieties might with advantage be included in some stands. *Violas* are not referred to in detail, the number and variety being practically endless.

These notes are not intended to be exhaustive, but to give some idea of the general character of the flowers shown, as they appear to one who makes a special study of hardy flowers. —S. ARNOTT.

Small Copper Butterfly.

The "merry little Copper" Butterfly dashes to and fro in gardens and open fields in summer, lending to the scene that aspect of joyousness and brightness which the flapping wings of these frail fair creatures always give. It, of course, has been mentioned by "Entomologist" in his notes on "Insects for Garden Adornment" recently concluded in the *Journal*, and if it does no especial good, it does no especial harm. We may see it



Small Copper Butterfly.

all through October and even into November; for the autumn individuals of this species do not survive the winter, but flutter on until their lives are ended by the cold nights. The Copper is inclined to be pugnacious, and these butterflies may be observed chasing autumn specimens of the common Blue, or even the *Tortoiseshell*.

The caterpillar of the Copper Butterfly is found in August feeding upon *Docks* and other species of *Rumex*. The "Coppers" appearing in October prove to be the parents of a brood which hibernates. They possibly pass the ungenial months low down, resting on the stems of grasses or upon the earth.

Obituary.

Mr. James Smith, V.M.H.

The death of this notable gardener in the sixty-sixth year of his age, in Scotland, will be learned with surprise and regret by the horticultural fraternity in general. He was such an amiable, straightforward, manly man, that everybody respected and trusted him. We always found Mr. Smith quiet; at least not inclined to be impulsive, but meditative always, weighing well his utterances. He died at midnight on Friday last.

For twenty-nine years he has been head gardener at Mentmore, first to the late Baron M. Rothschild, and then to Lord Rosebery, having during his long tenure made considerable alterations which were somewhat fully recorded in the *Journal of Horticulture* in our Spring Number for 1900. A photograph of his own house (but not of himself) was given at that time. We have been unable to secure a portrait of Mr. Smith. In appearance he was tall and rather spare, with white beard and hair, keen grey eyes, and even features.

As a gardener his practice has gained great repute. He was a member of the Fruit and Vegetable Committee of the Royal Horticultural Society, much in request as a judge, and a writer of note in our own and other gardening papers. Mr. Smith was one of the original Victoria Medallists of Honour in horticulture. His special lines were fruit, Orchids, and *Chrysanthemums*, and he was keenly interested in hybridisation.

Mr. Smith left Messrs. Veitch's, Chelsea Nursery, in 1869 to go as gardener to Lord Gainsborough, and left a year or two afterwards for Mentmore.

Lack of "Push" in the U.S.A.

The editorial comment below, from "San Francisco Argonaut," shows the surprising backwardness of the American Government in a matter of the most vital importance: "The need of a parcel-post system is more keenly appreciated in Europe than it is in this country. After vainly urging the Government authorities at Washington for joint action, the British Postal Department has established an independent service. Under this system parcels weighing 11lb are carried for seventy-two cents from any part of Great Britain to any part of the United States. In bulk a maximum in girth and length of 6ft is allowed. Since the Government of this country has refused to co-operate, the British Postal Department has made arrangements with the Adams Express Company to carry the parcels in the United States. An agreement has been entered into with Germany by which the Postal Department of this country carries parcels of 11lb coming from there, and sends parcels of the same weight to Germany, but it is said that a movement is on foot to reduce the maximum weight to the limit recognised in domestic mail of 4lb. The Belgian Government is said to favour the establishment of such a service with this country, and the Anglo-American Chamber of Commerce at Brussels has asked the Chamber of Commerce in this city to favour the movement. The parcels post has become a commercial necessity, and it is time that this Government adopt it."



Fruit Forcing.

MELONS: IN HOUSES.—The days are now shortening, the nights being relatively cold, even white frost occurring in the morning, and the moisture increases, therefore it is necessary to exercise care and judgment in watering, never doing it unnecessarily. The latest plants, however, with the fruit swelling must not be allowed to become so dry at the roots as to prejudice the foliage. Maintain moderate moisture by damping the floors, walls, and sides of bed every morning and at closing time, earthing up the roots as required, but late plants require less soil to grow on than the midseason plants. Remove all superfluous growths as they appear, and maintain a temperature of 65deg to 70deg at night, 5deg less on cold nights, 70deg to 75deg by day, up to 85deg or 90deg with sun. Keep the bottom heat at about 80deg. Fruit ripening will be better for a little extra fire heat and a circulation of air constantly. A dry condition at the roots, but not so as to cause the foliage to flag, accelerates the ripening process and enhances the quality of the fruit.

IN PITS AND FRAMES.—In those heated solely by fermenting materials no water will be required after this time unless the soil is dry and the foliage becomes limp, which it must not be allowed to do. Any water supplied should be so as not to wet the foliage or even the surface of the bed more than can be helped. Keep the frames well lined, admitting a little air constantly, which, with the fruit raised well above the surface of the bed, will do much to accelerate the ripening, prevent decay, and impart flavour. Any fruit it is wished to keep for a time should be cut when it is changing colour with a good portion of stem, and be kept in a dry, airy room, or if wanted ripe at once it may be placed in a warm, airy house on a shelf in the full sun. Melons ripen better there than in frames or pits devoid of fire heat.

VINES: EARLY FORCED IN POTS.—This is the most advisable method of securing a supply of thin-skinned, fresh, ripe Grapes early in spring, which are a necessity in some establishments. The best varieties we have tried are White Frontignan, Foster's Seedling, Black Hamburgh, and Madresfield Court. The great evil in early forcing Vines in pots or anywhere is overcropping, the berries not attaining the size and perfection of colour and finish so essential to their high appreciation. Where bottom heat can be given to start them they will show their estimation of it, and the soft glow of moisture given off by the fermenting material in breaking freely. It is desirable to stand the pots on brick pedestals, placing the bricks loose and so high that the rims are slightly raised above the pot edge, the arrangement being such that the pots will be in the centre of the bed, which should be 3½ft or 4ft wide, and as much in depth. Leaves (Oak, Beech, or Spanish Chestnut) being placed in to fill the pot, a gentle warmth will be afforded the Vines, and the roots will pass from the pots into the leaves, deriving support for the swelling and perfecting of the Grapes.

To have Grapes ripe at the end of March or early in April the Vines should be started not later than the early part of November, and they ought to be placed in position by the middle of October, so that they may have about a fortnight of preparation in the way of admitting air freely above 50deg, this being secured by artificial means, and then the sap will become quickened, ready for starting the Vines away strongly when forcing proper commences. The canes must be depressed to a horizontal position, or lower, to secure them breaking regularly. Damp the canes morning and afternoon, but do not keep them constantly dripping with water. In an atmosphere kept at a temperature of 50deg to 55deg the buds will soon begin to swell, then gradually raise it day and night to 60deg to 65deg when they are breaking, allowing an advance of 10deg to 15deg from sun heat. The temperature at the base of the pots ought not to exceed 75deg, and it is better to commence with it at 65deg about the pots, and increase the warmth as the growth advances. Water must be given carefully at first, that the soil be kept evenly moist, not in any case wet, as this retards rather than forwards root formation, and it is only when the Vines have leaves and evaporate largely that plentiful supplies of water are required.

MIDSEASON HOUSES.—Black Hamburgh and other descriptions of thin-skinned black Grapes have the colour taken out of them by hanging, and it can only be lessened by good spread of foliage, or drawing a double thickness of herring net over the roof lights. The latter is the preferable plan, as lateral growths interfere with light to the principal leaves, and the free access of light and air so desirable for maturing the wood. The Vines from which the Grapes have been cut may have the growths

cut back to a few joints above the pruning buds, first curtailing the laterals, and then cutting back the main growths, this insures the buds becoming plumper, whilst the freer access of light and air affects the wood favourably. A free circulation of air is necessary to expel damp, with a little, constantly, to prevent the deposition of moisture on the berries. Maintain warmth in the hot-water pipes when the external air is cold and damp, but the wood being ripe, and the growth matured, it will suffice to maintain a temperature of 50deg, and the cooler by day the house is kept, the longer the Grapes will keep plump. Vines that have not the wood ripe should not have a less temperature than 60deg, and this, with a free circulation of air, must be continued until there is no doubt on the point. Keep the laterals well in check, not allowing them to interfere with the chief growths. The border must not be allowed to become too dry, or the Grapes will shrivel, therefore afford a supply of water where necessary, always in the morning and on a fine day, so that air can be given and the superfluous moisture pass off. The watering will not do the least harm, for it is not moisture at the roots, unless excessive, that causes Grapes to spot and decay, but a confined, stagnant atmosphere. It is condensed moisture (may be imperceptible) on the berries that gives moulds their opportunity, which they never let pass by, but grow and multiply under the favouring circumstances. Keep well ventilated, and have no leaks in the roof, then all will be well with the Grapes.—ST. ALBANS.

Kitchen Garden.

LETTUCES.—If a good supply of seedling plants are at hand, dwarf and stocky in growth through being grown thinly, the result of sowing sparingly or thinning out early, these may safely be transplanted to permanent positions. The best places for growing winter Lettuce are undoubtedly south borders which lie dry and sheltered. The soil may be rich and capable of sustaining a steady growth, but where any excess of moisture naturally drains away. Lift, if possible, the plants with small balls attached, and plant them 6in apart in rows a foot asunder. This permits of the necessary cultural operations, weeding and hoeing, being carried out with ease. Where natural shelter for the plants cannot be commanded it will probably be possible to extemporise a temporary shelter, for a portion at least, with moveable lights. Too close confinement will cause damping. Some may be planted in frames, but the fullest exposure should be given until it is really necessary to protect. In addition to planting a good supply of strong seedlings, some plants of larger growth and commencing to heart may be lifted with a liberal quantity of roots and soil, and be established in frames, the lights of which ought not to be placed over them except during severe frosts or heavy rains. These will come in useful for early winter use. Plants standing in seed beds may with great advantage be thinned, as if crowded they will certainly succumb to damp and frost.

CAULIFLOWERS.—The autumn Cauliflowers are turning in now, and need protection. This may be afforded to the heads by laying over them a leaf, which prevents discolouration. Caterpillars may be troublesome, and if so ought to be searched for and destroyed. Seedlings from a sowing made last month will be of sufficient size to prick out, either on a sheltered border or in a frame. The latter offers the advantage of giving slight protection from frost and damp in winter.

TURNIPS.—Thinning out must be continued until the plants stand at a sufficiently wide distance apart for developing roots satisfactorily. Those which have advanced to a useable size must be kept free of weeds and useless leaves. Later some of the roots may be taken up and stored for use in winter when roots in the open ground cannot be obtained. To encourage the growth of young seedlings dust lightly with soot and hoe in. Hoe also to keep down weeds, and to break the caked surface of the soil when it has dried after rain.

POTATOES.—Diseased crops are, unfortunately, prevalent this season, and the bulk of varieties should be lifted as soon as possible, carefully examining them and picking out all those affected, which it is best to burn. All tubers apparently clean should be placed under cover to dry thoroughly, laying them at present thinly, and excluding light, except from those intended for seed. In a few weeks another examination may be made, after which store the sound tubers in a frost-proof place, but cool and thoroughly dry. After lifting a crop, collect and destroy the haulms by burning.

ONIONS.—The sowing of Onions made last month should need little if any thinning, but the removal of weeds from among the seedlings ought to be effected early before they become strongly rooted.

SPINACH.—Thinning out and weeding is necessary with the crop of winter Spinach. The final thinning should be made to the extent of leaving the plants 8in apart. Frequent hoeing between the rows is of advantage in promoting a healthy growth.

TOMATOES.—Outdoor plants may be encouraged to ripen their fruit more quickly if lights can be set up before them. Fruits commencing to colour will quickly ripen if gathered and placed on a shelf in a warm house.—EAST KENT.

THE BEE-KEEPER.

Weak Colonies.

During the present month any weak stocks which it is thought will not be able to pass through the winter safely should be united. What few bees there are in such colonies will be comparatively old and very many of them worn out, so that it would be next to useless to stimulate them in the expectation of their building up sufficiently strong to winter successfully, or even to seal up food for their use. In order to obtain the utmost power from them the next season it is necessary to unite such stocks to other medium colonies, making fairly powerful lots of not less than seven bars well covered.

Uniting, when the bees are on bar frames, is accomplished by lifting out, after first smoking and subduing them, with the combs of bees on the stand which they are to finally occupy, and feeding commenced at once, so that their stores may be placed in their natural position. It must be understood that only those stocks which are on bars, and which are near to one another, can be united in this manner. Those colonies which are distant from one another in the same apiary must first be brought together gradually by short stages on such days as they can fly, and then united, placing the hive midway between the positions which the two separate stocks occupied, with a large alighting board at the front. This prevents fighting, and causes the bees to mark the location.

It is better to unite the weaker stocks with their stronger neighbours in preference to joining the stronger to the weaker. There is less probability of robbing. The old queen preferably should be removed a day or two prior to uniting. The next fine day when the bees are not flying, and yet not cold enough to chill them, say 50deg to 55deg, there will be no trouble. To induce the bees to fill themselves with honey go to the hive to be operated upon, and blow a good volume of smoke in at the entrance, at the same time jarring the hive to frighten the bees, as upon this depends the success of uniting. Take the combs of bees from the hive and alternate them with the frames in the other colony. The efficacy of uniting depends entirely upon letting daylight in between the bars, and both colonies being thoroughly gorged with honey, and this is only the case when the subdued hum is heard. Until they roar, smoke should be supplied at intervals.

Hungry bees, or bees on frames, and loose bees never unite peaceably, so that when there is not plenty of unsealed honey to gorge themselves with they should, despite the labour involved, be sprinkled liberally with syrup before attempting a union. If afterwards there are any signs of fighting use the smoker freely, and thump the hive sides. Stocks which do not cover the whole of the frames should be dummied up, and the unnecessary combs removed. The latter should be wrapped up in newspaper and afterwards stored away in a dry place where mice will be unable to get at them.—E. E., Sandbach.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1903. September.										
Sunday ...13	S.W.	deg. 51.7	deg. 49.2	deg. 61.0	deg. 38.3	Ins. —	deg. 56.2	deg. 58.9	deg. 59.0	deg. 32.0
Monday ...14	N.N.E.	51.4	47.5	57.7	45.5	—	55.5	58.2	58.9	38.9
Tuesday ...15	N.N.E.	47.2	45.0	57.0	40.3	—	55.0	57.7	58.5	31.8
Wed'sday 16	N.N.E.	50.0	48.3	59.0	43.9	—	54.8	57.1	58.1	36.5
Thursday 17	S.W.	52.9	49.9	64.2	34.9	—	53.9	56.9	57.9	29.0
Friday ...18	S.S.E.	55.0	52.0	63.7	43.0	0.01	55.0	56.7	57.7	35.2
Saturday 19	E.S.E.	58.9	49.3	64.9	53.0	—	56.3	56.8	57.4	45.0
MEANS ...		52.6	48.7	61.1	42.7	Total. 0.01	55.2	57.5	58.2	35.5

Misty mornings and fine days.

TO CORRESPONDENTS

* * * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.

PLACING ROSES IN POTS OUT OF DOORS (R. T. L.).—

It is not necessary at this season to place Roses outdoors that have been grown in an airy greenhouse for the ripening of the wood, as that will, if the plants have had plenty of light, be thoroughly perfected, and the only good that exposure would effect would be in inducing rest, assigning them a sunny position, and housing before the weather becomes severe, the pots being plunged in ashes to the rims. The Cactuses should between now and the end of the present month be placed indoors, or before the soil becomes soddened with wet or the plants injured by frost.

HIVE OF BEES WITHOUT BROOD: IS IT QUEENLESS? (S. P.).—

"E. E., Sandbach," writes: "It is nothing unusual for a colony to be broodless at this time of the year, owing to the season finishing early, and artificial stimulation not being followed up. Before deciding that the stock is queenless your correspondent may test it by putting a bar of hatching eggs in the centre of the brood nest, and if queen cells are commenced upon it then it is without a queen. They would be in the same condition if they had superseded the old queen and reared a virgin, but the probability is that it is simply cessation of breeding, which is quite natural. If a half pint of warm syrup is administered nightly for a week there will no doubt be eggs laid."

ROSE LEAVES BLACKENED AND COATED WITH A WHITE SUBSTANCE (W. R.).—The leaves are affected by the Rose-leaf black blotch (*Actinonema Rosæ*), which is very common on Rose leaves, and seen in almost every garden this season, and many cultivators treat it as of small account, except for disfiguring the foliage. The spots often run into each other, and cover a large portion of the leaves, chiefly from the point. The spots are at first purplish, half an inch to an inch broad, and then black. When black they become closely adherent with flexuous web-like lines, and have a whitish appearance on the upper side, to which the affection is confined. Here and there are small black conceptacles or perithecia, which contain the spores, but these are not always present. It has been advised to remove all the leaves, but if this were done the bushes would, in many cases, be entirely defoliated. Spraying with blue water, Eau Celeste, or ammoniacal carbonate of copper solution, is a preparation much in vogue with some cultivators, and is found of much service.

PROTECTION AGAINST SLUGS AND SNAILS (F. T.).—

The question is often asked, and we extract from a recent number of the "Gardeners' Chronicle," an interesting account of experiments that have been made to ascertain the means by which some plants are protected from the attacks of slugs and snails. Tannin appears to be one of the substances objectionable to them. Experiments made by Stahl showed that Carrot, which, from its sweetness and absence of tannin, is particularly attractive to slugs, if treated with a one per cent. solution of tannin remained practically untouched by the common small garden slug, *Limax agrestis*, and if a solution of 1 in 1,000 of water be sprinkled on the animal, it rapidly disappeared from the scene of operation. Similarly, it was found that the leaves of *Valisneria*, *Trapa*, and other water plants containing tannin were avoided by the water snails, *paludina*, *limnæa* and *planorbis*, but if the tannin were extracted the leaves were speedily eaten. Acid sap has a similar effect. *Rumex acetosella*, *Oxalis* and *Begonia* are disliked on account of the potassium binoxalate they contain. This was proved by soaking pieces of Carrot in one per cent. solution of the salt, and putting them before the slugs *Arion hortensis* and *Limax agrestis*, and the snail *Helix hortensis*, the pieces being untouched after a lapse of several days. A solution of the salt of 1 part in 1,000 of water was found to irritate the animals, and cause them to remove to other quarters. Plants with hairs secreting acids are similarly avoided, as in *Cicer arietinum*, *Oenothera*, &c. Ethereal oils are similarly protective; leaves of *Rue*, *Acorus calamus*, and *Mentha piperita* are carefully avoided by snails, but if the oil is extracted they are readily eaten. Bitter

substances are also protective. Young leaves of *Gentiana lutea* and *Menyanthes trifoliata* are scarcely touched, though extracted leaves are at once devoured. In autumn the bitter substances appear to be no longer efficacious.

RASPBERRIES FRUITING ON CURRENT YEAR'S CANES (W. A., Shrewsbury).—We assume that you refer to the summer-bearing varieties, such as Red Antwerp, Baumforth's Seedling, Fastolf, Superlative, &c., which generally produce the fruit on growths from the canes formed in the previous season. In such case it is somewhat unusual for these summer-bearing varieties to bear fruit on the current year's growth, though it sometimes occurs on a lateral here and there, and even terminally, especially when the canes are very vigorous, and the season uncommonly wet. We have also noticed that when the growths from the previous year's canes are damaged by spring frosts, the current year's growths are subject to bear fruit late in the summer. Of course, it is not uncommon for last year's canes to bear fruit on the current growths when cut over close to the ground, even in the case of the summer-bearing varieties, and this practice obtains with the autumn-bearing kinds which are cut over at the ground annually, and thus produce fruit on the current year's growth in late summer and early autumn.

HEDGE FOR SHELTER AND PROFIT (E. R.).—There is a great difference between a hedge for protection and the term as applied to a shelter. In the case of a hedge that must form a barrier against men and animals the trimming necessary to form and maintain a close growth is fatal to the production of fruit, though we have seen fairly good crops of Damsons on bushes planted so closely as to form a hedge in three or four years, only the straggling growths being shortened from time to time so as to prevent too much encroachment, and maintain a relatively compact growth. The best subject for the purpose is the Kentish Cluster, Farleigh, or Crittenden Damson, a mere wildling, but no fruit tree has been more extensively planted as shelter-screens to fruit plantations, and the profusion of fruit it bears, even in exposed situations, can scarcely be credited. Indeed, it is a good tree as a protection from gales on the outsides of fruit plantations or gardens, especially when the ground on both sides of the hedge is in one person's holding, they may be advantageously planted in the hedges, and a quantity of fruit taken where larger trees would be an objection, sides of roads and near foot-paths being avoided. Where a fence, not to be kept very trim, is desired, bushes should be planted, say a yard apart, and after the hedge is as high as desired every fourth or fifth tree may be allowed to grow up and form a head, which, well pruned in for a few years, soon become symmetrical, are beautiful in flower, and more so when laden with their rich violet fruit. Cob Nuts are not suitable for exposed situations, do not form a good barrier, and do not bear well unless the growths are relatively thin. Cherries, unless Kentish, do not succeed as screens. Semi-wild, only irregular growths being pruned in, that variety bears enormously, also Morello, especially when trained to a wire trellis of 5ft or 6ft height. We advise the Damson for your position.

NAMES OF PLANTS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (F. W.).—The Roses were subjected to an expert, who declined to give them names, saying they were altogether out of character at this late season. Your better plan would be to send good specimens next summer to a leading Rose-grower. (F. T.).—The Ivies are: 1, *amurensis*; 2, *dentatus*; 3, *atro-purpurea*; 4, *aurea spectabilis*; 5, *donerailiensis minor*; and 6, *Emerald Green*. (J. Thom.).—1, *Clematis græca*; 2, *C. graveolens*; 3, *Corylus Avellana aurea*; 4, *Berberis nepalensis*; 5, *Quercus coccinea*. (A. C.).—1, *Tasconia digitata*; 2, *Weigela Eva Rathke*; 3, *Acer colchicum rubrum*. (Bury).—1 *Fuchsia virgata*.

NAMES OF FRUITS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (G. F. B.).—1, *Frogmore Prolific*; 2, *Sandringham*; 3, *Cox's Pomona*; 4, *Newton Wonder*; 5, *King of the Pippins*. (C. N. R.).—1, *Worcester Pearmain*; 2, *Lord Burghley*.

PUBLICATIONS RECEIVED.—"The Animals' Friend," containing "The Sparrow and the Government," &c. * * "Tropical Agriculturist," August, 1903, containing notices of the latest book on Tea, Vines in Hungary, Coconut Palms and their Enemies, a new Fruit Jelly (roselle), Pineapple culture, Soil Nitrication and Mosquitoes. * * "The Indian Agriculturist," September 1. * * "Le Moniteur d'Horticulture," containing a coloured plate of *Heucheras*. * * "The Orchid Review," September, 1903. * * "Practical Advice on the Best Vegetables to Grow for Home Consumption and Exhibition." Albert Upstone, price 3d. * * "Pall Mall Gazette," containing illustrated article on the new premises and offices of that paper. * * The Annual Report of the National Dahlia Society, 1903.

Trade Notes.

Ant. Roozen & Son's Bulb Catalogue.

No more complete catalogue of Dutch and Cape bulbs exists than that of Ant. Roozen and Son, of Overveen, near Haarlem. It is not an illustrated catalogue, but its alphabetical arrangement and clear descriptions, together with the concise cultural notes given under each genus, makes it a book of reference for all who grow bulbs; and as such we recommend it. The London agents of this firm are Mertens and Co., 3, Cross Lane, St. Mary-at-Hill, E.C.

Messrs. Baker of Codsall.

Under the laconic title, "Bakers' Nurserymen and Seedsmen, Wolverhampton," we have received a notice of the establishment of this new firm. The manager is Mr. G. W. Kerr (late of the staff of Dobbie and Co.), and besides the Old Hall Nurseries at Codsall, Staffs., the firm has opened a shop and offices at 67, 69, and 71, Lichfield Street, Wolverhampton. The nursery amounts to about 100 acres, and there are specialists for every department. Cottages have been built for several of the workmen, a fine residence is in course of reconstruction for Messrs. Baker, a villa for the manager, and a huge packing warehouse, with the necessary offices, has been erected in a convenient position. Underneath this warehouse are dark cellars for the preservation and for the retarding of bulbous roots. A portion of the ground has been already covered with glass—some 60,000 feet—and the glass is being rapidly extended. In five of the glass houses no less than 14 tons of Tomatoes have been gathered this season. The firm has nearly 40,000 Roses, which have been budded this year. Chrysanthemums are a speciality, for there is now to be seen a magnificent batch of 20,000 in pots, whilst there is also a very fine collection of the early flowering varieties. Of Dahlias there is already a good assortment. Herbaceous plants will ultimately cover ten acres of land.



Necessary Repairs in Farm Buildings.

When the cheerful blaze of the parlour fire is a thing to be most appreciated, as it is this September 14, the evening we pen these lines; when the rain is pouring down in torrents at least every alternate day, and the wind remains persistently in the N.E., we begin to wonder how soon we must be before we fetch up the stock to winter quarters in the yard and sheds. There is plenty of food still in the fields, grass in abundance, much of it rank and coarse; but still, with the help of hand food might keep stock going for some time. But the continued rains and unusual cold will cause a great falling off in the condition of the stock, and we prophesy a long winter within four walls.

Landlords in the matter of repairs are slow to move. It is not that they do not appreciate the necessity for action, but they know that work once begun takes time, and that bricks and mortar are most costly. Of course, it will be said that work should never be allowed to fall in arrears. Quite true; but do not other people beside landlords rather like to put off the evil day? A stitch in time—we all know the proverb—and a bit of mortar or a few bricks inserted at once will prevent a great breach in the future. Some farmers, too, are very loth to bother a good landlord on petty matters; would rather go on the as-we-were principle. Others, again, hate to take steps which appear only to irritate the agent and put his back up. In the days of farming prosperity the occupier would generally do all sorts of little jobs himself, and say nothing about them; that is, would cheerfully pay out of his own pocket. We know of one set of farm premises that were practically re-modelled by the occupier during a long tenancy; not only were the buildings put into good working form, but the dwelling house was improved and smartened. With what result? That on the father's death the son found it impossible to come to terms with the

landlord, and the farm was cut up and let at a very low rent to a class of men whose sole object is to get what they can out of the land, putting nothing into it. We could quote many other cases where tenants not only have received no help towards necessary repairs, but have been given to understand that they should feel much obliged to think they had been allowed the privilege of setting matters straight. We have in our mind just now some farm buildings, or, rather, ruins we might almost say, that loudly call for repair before the storms of winter—cow houses, or, rather, hovels, wherein no cow can expect to be even moderately comfortable, where last winter several were seriously ill from prolonged colds, and where none could really be expected to yield their proper quantity of milk. The agent has been interviewed, has been written to, has been reminded of his promise, and yet the tenant still waits. The stables are equally bad, and the barn not weatherproof. Of course, it will be said, Why not leave? Notice was given last year, but withdrawn on the distinct understanding that needful repairs should be executed at once. The tenant is elderly and in bad health, and would rather not move if it were possible.

Now as to general repairs on farms. What is the first point to be looked to? Rainproof stables and byres. A very small leak in a roof can soon make things most uncomfortable, and one tile gone, the next is soon loosened. The same will apply to slates. Thatch is not much used now, and where it is there is not the least excuse for a dripping roof; there is always at least one man on every farm who knows how to make a stack rainproof, and the materials are not costly. Next to the roof, as we are on the question of water, is the spouting. Broken, bad spouts will disgrace any building, and not alone disgrace, but absolutely do great damage to the foundations, let alone the misery of the more than continual sloppiness on a wet day, causeway, yard, all of a flood; a waste of that very water which may be so urgently needed next summer. And in the case of buildings which "give" on the new yard this extra and unnecessary water is distinctly baneful to the manure, washing out valuable and costly constituents.

Now we will just look inside again. Are the floors of stable and cow house firm and unbroken, or are there dislodged stones, blocked up channels, broken grates? A properly laid level floor is so much easier to make and keep clean, and will not harbour any filth. We said level floor, but there must be sufficient slope to permit of the falling into the gutter of liquid portions of the manure. Doorways are apt to get much trodden down, and woodwork, windows and doors, too, may need some trifling repair. As for inside cleanliness, we ought not to have to mention it; but cobwebs and dust lurk in unsuspected corners, and ere spring comes again will accumulate to an alarming extent. Remember, the milk cows practically pass the whole of the winter under cover, and at least let their quarters be clean to begin with. There is nothing like lime-wash and sunshine. Limewash is within the reach of all; and give a chance to the sun to show his face by keeping windows clean. Also remember that hot air is not all that is needed; it must be pure as well as warm, and to this end just give more than a passing glance at the ventilators.

There is just another point. On most farms of any size during the winter months there is great steaming of food. In what condition is the boiler? Is all the apparatus in order? A breakdown in the cold weather, and when fattening pigs are up, is no little matter. At any rate, the steam house will be none the worse for a bit of cleaning, and surely during these broken days, when outdoor work is at a standstill, the ordinary farm hands might get all the premises into fine order. There generally is one man a bit of a carpenter, a handy man, and if he has a few tools he will soon earn in unconsidered jobs a good day's wage. Fasteners on doors and windows claim attention. A door or window for ever banging destroys itself more quickly than by years of actual service. Pulpers and cutters should be looked over, and worn parts renewed. The careful eye of a master will note many things that would be the better for a little attention at once; repairs have to be made sooner or later, and sometimes the breakdown comes at a most inconvenient moment.

Healthy Sheep.

Enough of this subject. A week or so back we referred to the great losses among sheep in the year 1880, from liver fluke or rot, the result of the wet seasons of 1878-79. Flocks

that had never suffered before were decimated then, and we much fear that 1904 will see similar disaster. We would urge all flock owners to keep off low-lying, unsound land, which most surely breeds the pest. Sheep are not by nature fitted for wet meadows; high and dry they should lie, if possible. The danger of liver rot is just now. Now is the time that ewes may contract the complaint that only ceases with their death. They will not die during the winter or early spring, but as soon as ever they have lambed they begin to waste away, and no power can stop them. We have seen it over and over again, and any old shepherd will corroborate all we say, and probably will use far more forcible language. Some readers will aver that they have difficulty in finding high, dry feeding grounds just at this season. The effort will have to be made if the breeding flock is to be kept healthy. The time of inconvenience may be shorter or longer; it just depends upon frost. Given a sharp, severe frost, all danger even of wet pastures is at an end. But it is well to bear in mind if the frost destroys chances of liver fluke, it does not permanently improve low-lying ground, which can never under any circumstances be good sheep lair.

We have spoken about the ewes and their preservation, for two lives depend on their welfare; but the lambs, too, need safeguarding. Get all lambs on to arable ground. Cabbage, Kale, Rape seeds, and Turnips—any or all of these will prove most safe and valuable lamb feed. The lambs will be preserved in health, and the land will be benefited by their presence.

Those of us who are interested in the autumn lamb sales will note with satisfaction that at last the railway managers see their way clear to lowering the rate of ram carriage. The new rates came into operation on September 1, and will prove a great boon to many a purchaser. It is not often that the British farmer gets any favour from the railway companies; their favours are reserved for the foreigner.

OLD RATES.				NEW RATES.			
	s.	d.			s.	d.	
50 miles	8	4	...	1 ram	...	6	3
100 "	16	8	...	"	...	10	5
150 "	25	0	...	"	...	12	6
200 "	33	4	...	"	...	14	7
300 "	50	0	...	"	...	18	9

This should do something to help up the price of sheep and to distribute good sires.

Work on the Home Farm.

The harvest is still the engrossing task, but we are glad to say it is nearing a conclusion. Although we have not been without showers they have not been heavy enough to stop leading of Wheat or Barley, and even of Oats in one case. There is no Barley about here stacked in condition for threshing at once; in fact, it should all stand for quite two months. But the maltsters will want it before then, and they will probably grumble a good deal when they get it. It has lost colour sadly, but is of nice body and curl, so it should make good brewers' malt.

The last night or two have been distinctly frosty, and we hope will have checked the progress of Potato disease, which is very prevalent amongst earlies and second earlies, such as Mona's Pride and British Queen. No disease can be found yet amongst the late sorts, but the haulm is dying rapidly. Some stacks were thatched when rain prevented leading, and the remainder will have to be done before the men can go to other work.

The seed land will want ploughing ready for Wheat drilling, and it must be ploughed at once. That will occupy the horses until the Potatoes want lifting, so there will be no time for autumn fallow. The only alternative is to employ steam power, but the nearest steam tackle is full of orders for weeks, and other sets are too far away. Farmers were growling both last autumn and in the spring about the difficulty of getting steam diggers. The way out of the difficulty is to co-operate and buy one for the sole use of the combination. They are most valuable articles, especially after a late harvest, which shortens the available autumn time, as by their use we can complete necessary work which otherwise would have to remain undone.

Ewes which will be mated with the ram at the end of the month should be dipped at once. We notice that county authorities make orders for compulsory dipping, and then rescind them. Sheep dipping is evidently a question which cannot be left to local option, but must be made entirely comprehensive.

Feeding pigs need full rations now. As soon as a sufficient supply of Potatoes is available the steamer must be brought into use. Although many pigs will thrive on raw Potatoes and meal, there are few which will not pay for the expense and trouble of the cooking process.

Barter's WILD GARDEN BULBS.

OUR SELECTION OF
DWARF - GROWING INDIGENOUS
AND OTHER BULBS,

Adapted for Rockeries, Sloping Banks,
Odd Corners, and Naturalization.

CONTAINS

1,100 Fine Bulbs. Price 21/- nett.

Sent Packing and Carriage Free on receipt of remittance.

100 Aconites	100 Blue Grape Hyacinths
100 Blue Bells	50 White Grape Hyacinths
50 White Bells	50 Feather Hyacinths
100 Star of Bethlehem	50 Chionodoxas
100 Fritillarias, mixed	50 Allium Moly
100 Snowdrops	50 Dogtooth Violets
100 Triteleias	25 Anemone Fulgens
50 Snowflakes	25 Anemone Apennina

Half the quantity, price 11/6. Packing and carriage free.

CARTERS WONDER BOX OF BULBS, containing 1,000
Hyacinths, Tulips, Narcissus, &c., price 21/- nett.

Sent Packing and Carriage Free on receipt of remittance.

Complete List of Contents on application.

"HOW TO GROW BULBS AND TUBEROUS PLANTS,"
Price 7d., post free.

JAMES CARTER & CO.,

Seedsman to His Majesty the King,

237, 238 & 97, HIGH HOLBORN, LONDON

BY SPECIAL
APPOINTMENT



ORCHIDS—ORCHIDS

QUANTITY IMMENSE.

Inspection of our Range of Houses
IS CORDIALLY INVITED BY

HUGH LOW & CO., BUSH HILL PARK,
MIDDLESEX.

STRAWBERRY PLANTS.

All the Leading Varieties from the
open ground and in pots.

Priced Descriptive Circular Post Free.

DICKSONS Nurseries CHESTER

1500,000 BULBS.

Spanish Iris, Yellow, White, and Blue	7/6 per 1000.
Crocus, all colors	5/- per 1000.
Sir Watkin Narcissus	5/- per 100.
Horsefieldii	5/- per 100.
Trumpet Narcissus	7/6 per 1000.
Glory of Leiden Narcissus	6d. each.
Madam de Graaff	3/- each.
Sweet Scented Pheasant Eye	
Narcissus	5/- & 7/6 per 1000.
Mixed Narcissus	5/- per 1000.
Double Daffodils	5/- & 10/- per 1000.
Tulips, Mixed (choice)	2/- per 100.
Single Lent Lilies	3/6 per 1000.
Snowdrops	5/- & 7/6 per 1000.
Strawberry Plants	1/- per 100.

SEND FOR LISTS BEFORE
ORDERING ELSEWHERE.

Cross & Son, Wisbech.

CLIBRANS DOUBLE PRIMULAS.

EXCELLENT for cutting or as Pot Plants. We
offer the following choice varieties, strong
healthy plants, in 3in. pots, at reduced prices.

	Each.	Per doz.
Alba Plena, pure white ..	9d.	8/-
Annie Hillier, light pink ..	2/-	20/-
Candissima, the best white ..	1/-	10/-
Earl of Beaconsfield, rosy carmine ..	1/3	15/-
Marchioness of Exeter, white speckled pink	2/-	20/-
Stewartii, double red, fine ..	1/6	15/-

CINERARIAS

from stores, 1/6 doz.; in 3in. pots, 3/6 doz.

CYCLAMEN

in 5in. pots, set with buds, 12/- and 18/- doz.

PRIMULA SINENSIS

to colour, or mixed in 3in. pots, 2/6 doz.

All above prices are special to this Advt.

ALTRINCHAM & MANCHESTER



For Market and Private Growers,

Ornamental Trees, Shrubs, &c.

Descriptive Catalogues Post Free.

J. CHEAL & SONS
Crawley, Sussex.

INTENDING PLANTERS

Are invited to inspect our stock of

**TREES & SHRUBS, FRUIT TREES,
ROSES, RHODODENDRONS.**

**EXTRA STRONG FRUITING VINES,
STRAWBERRIES IN POTS, &c.**

We have a large stock of the following—

Box, in variety, 2 to 4ft. (30,000).
Golden Yews, in variety, 1 to 3ft. (20,000), and Large
English Yew. [Specimens.]

Cupressus, in variety, 2 to 6ft.

Retinosporas 1 to 6ft.

Spruce Fir, 2 to 6ft.

Norway Maple, Sycamore, Mountain Ash, Birch,

Poplars, &c., 8 to 16ft.

Hollies, in variety, fine specimens, 8 to 12ft.

Standard Acer Negundo var. (5,000).

Prunus pissardii.

Thorns, in variety.

Laburnums

Flowering shrubs, Spiræas, Deutzias, Philadelphus,

Lilacs, Laurustinus, Olearia Hastii, Berberis,

St. John's Wort, &c.

Evergreens, Aucubas, Portugal Laurels, Laurels

in variety, Privet, &c.

Standard Apples, Cherries, Pears, Plums, Damsons

&c., in large quantities.

CATALOGUE FREE ON APPLICATION.

H. LANE & SON,

Nurseries, BERKHAMSTED, HERTS.



Journal of Horticulture.

THURSDAY, OCTOBER 1, 1903.

Fruit and Vegetables at Chiswick.

HERE was a little touch of
sadness about the magnificent
display of vegetables which was
opened to the public on Tues-
day last at Chiswick, because
everyone realised that it was the
last of many fine shows held in
the historic gardens. One felt a little
regret that it was the final, and hence-

forth Chiswick will be a place of shows no more.
Memories crowded themselves so thickly the
one upon the other of the famous shows that
have been held and of the renowned gardeners
who have met in the dear old gardens at
Chiswick; and though, by sheer force of cir-
cumstances, the scene of many triumphs must
be closed for ever, so far as horticulture is
concerned, it must be generally admitted the
last great show was worthy of the occasion.
Proud indeed must those individuals have felt
who were mainly responsible for the intro-
duction of the vegetable division, because of
the magnificent display of useful produce dis-
played; proud also must the Council of the
Royal Horticultural Society have felt of the
last Chiswick Show, and proud also everyone
present who has any pride in British horti-
culture.

In this short general survey it would be
hardly fair to mention names without including
each and all who did so much to make the show
such an unqualified success. It is only fair to
say, however, that, considering the circum-
stances, a finer exhibition of the products of fruit
and vegetable gardens has rarely been displayed
to public view. Indeed, one gathered the im-
pression that exhibitors, one and all, both
trade and private, had combined in one united
effort to make the final show worthy of the
reputation and records of Chiswick. Cer-
tainly the competition in many respects was
keen, but the main idea on the part of

READERS are requested to send notices of Gardening
Appointments or Notes of Horticultural Interest,
intimations of Meetings, Queries, and all Articles for
Publication, officially to "THE EDITOR," at
12, Mitre Court Chambers, Fleet Street,
London, E.C., and to no other person and to no other
address.

everyone, including exhibitors and officials, was to do his best, and the best can hardly be overrated.

In some quarters somewhat gloomy forecasts were made regarding the shows, which were certainly justified, considering the unfavourable season now drawing to a close, but there is a common saying that, no matter what the season may happen to be, there is always something good to be seen at shows. This was certainly true so far as it applied to the Chiswick Exhibition, and it afforded proof of the British gardener's capacity for overcoming climatic difficulties. We may fairly say that we have no ambition to see a finer display of vegetables, and if there were any doubts about a vegetable show being of sufficient interest to attract the public, we hope the Chiswick display has removed it. Fruit has, perhaps, been better shown and in greater quantity, but think of the season, realise the fact that the country is generally fruitless, and it will be agreed that this division was an unqualified success.

We are writing only of the first day, when the attendance seemed good, and though it did not include the select members of Society, such as may be seen on the green sward in the Temple Gardens, it was comprised of an interested, practical, hard-headed collection of horticulturists, who for the most part knew and understood the points of the produce staged. They criticised in some cases, and admired in the majority, and many, we think, went away with the acknowledgement to themselves that there is a good deal to be learnt in the art of growing and staging high-class fruit and vegetables. We can only hope that this, the first great combined show of fruit and vegetables held under the auspices of the Royal Horticultural Society, will be the forerunner of many others. This sentiment, if we mistake not, was shared by the various members of the horticultural fraternity who trooped from Chiswick, having visited its last show in the late afternoon on Tuesday, to join in the first, but we hope not the last, gathering of its kind—the gardeners' dinner.

The Rise of the Daffodil.

The great Daffodil Conference of 1884 opened up new possibilities, and hybridisers were soon at work, and seven years later new Daffodils were being put before the R.H.S. Daffodil Committee for honours. Prices went up, and now you can buy a Daffodil for 700s. One lady paid a few years back 1,000s. for one named after her. I knew an amateur who sold his watch to buy a new Pansy. A poor weaver at Nottingham walked twenty miles to get a little offset of a Tulip, for which he paid 10s., when someone suggested to him, would it not have been better to have spent the money on shoes for your children? but that friend was not himself a collector. A former clerk to Billingsgate Market bought at a public auction some fifty or sixty years back, for the sum of seventy odd pounds, a variety of Tulip to add to his collection. During the Tulipomania in Holland, a man exchanged a carriage and pair of grey horses, with all the trappings, and £300, for a Tulip. What the future of the Daffodil craze may be I should not venture to forecast. I have heard of a syndicate of amateurs who have given a Daffodil raiser £500 for a portion of his new Daffodils, and a trading firm have invested £500 in the same man's new varieties.

While the taste was growing in Australasia Mr. G. S. Tithe-ridge, the well-known theatrical artist there, was smitten with Daffodils, and became the exponent and special pleader of the family in his own fascinating style, as he travelled from town to town and mixed with the flower-loving amateurs. Mr. Triggs, Wellington, New Zealand, also a gentleman at The Hut, near Wellington, were early pioneers in cultivating and spreading the taste for Daffodils by allowing access to their collections. Mr. Triggs frequently lectured on the beauties of the flower. At Dunedin, New Zealand, the same progressive spirit was manifested in the headmaster of the Boys' High School lecturing on all occasions, and getting his townsfolk to become Daffodil amateurs.

The leaseholder, or, as he is called, "King of the Isles of Scilly," and his tenants derive a large annual income from the flowers I popularised. Some six years ago I chanced to meet Mr. Dorrien-Smith, and he informed me that he and his tenants had shipped that year to the mainland 150 tons of cut Daffodil flowers. A few years before that time, when on a visit to him, he was proud in telling me fifty tons has been shipped that spring, and he seemed to think he had about reached the limit. The quantity he now ships, supposing that the development has gone on at the same ratio of increase, should be about 300 tons.

In the Colonies of Australasia, especially Melbourne, the flower boys sell an immense quantity of Daffodils, "Princes" being the favourite, and as there are warmer and colder climates within a few miles of Melbourne, for many weeks in succession the Melbourne public can have their posy of Daffodils for a few

pence to adorn their rooms. Indeed, the Melbourne people have Daffodils in one form or another for several months.

To show the interest taken in these flowers, when chatting with the members of the Horticultural Society of Dunedin, one man told me that he had travelled sixty miles to hear what I had to say on the subject of his favourite flower, and for weeks after letters of invitation were following me. At Dunedin and Invercargill I was made a life member of their horticultural societies.

In Tasmania the Daffodil amateurs are numerous, and both here, in New Zealand, and Australia I found holders of the newest Daffodils, costing from 200s. to 300s. for one bulb. These were very advanced Daffodil amateurs.—(From an essay on "Ancient and Modern Daffodils," by Mr. Peter Barr. V.M.H.)

Garden of the Royal School, Bath.

The position of Mr. Drew as gardener to this College at Bath is not at all an enviable one. The reasons annexed are that the soil is a stiff, hard, unyielding clay, cold and most ungenerous to the tiller; and while the ground is so unconquerable, the aspect lies high and exposed, and Bath is a hilly place without a doubt, swept, too, in places by winds the reverse of tender. Yet here has Mr. Drew lived and laboured for full twenty years, keeping and dressing, planting and sowing, and to some purpose, too, as I will presently show. He speaks in terms of the warmest praise of the Principal of the College, whose kindly addresses have been the mainspring of the gardeners' persistence.

Truly, April is not the time to see a garden aright, but facts can still be gleaned. To start with, I was shown an exceedingly fine plantation of Sovereign Strawberries. This amounted to half an acre; yet from so small an area the yield in pounds avoirdupois in 1902 was 1,100, making an average of 11b per plant. The cultural practice is to take the runners in August, grow on the plants, but nip off their flowers during the next summer, and allow them to fruit the year after that; or, in other words, at two years of age. They are planted 2½ft apart, and liberally treated.

Dessert ought to follow dinner, but here I have served it first. However, to Cabbages; and perhaps few have heard of a variety of Cabbage named Goldfinder, but from what I saw of it here it is a gem for spring work, forming neat conical heads that are firm without being hard. Mr. Drew has grown the variety for thirty years, and before him his father grew it. As the old gentleman has a well-experienced son in charge of a large southern garden now in the making, it will likely become an heirloom (!) and some day may "bolt" (in a double sense) upon the world with a great history behind it. An early summer sowing gives plants fit to plant by the end of September, and these are cut in March. Broccoli are well done; and from one acre, a sufficient supply of Potatoes for an establishment numbering 140 persons is generally available. The varieties depended upon are Up-to-Date, Beauty of Hebron, and Snowball.

In the way of fruit trees, the Victoria Plums make a good showing, and a crop of half a ton was taken in 1902 from a very few trees. There are no fine fruit walls here, yet this does not minimise the productivity. Extra credit is due to the gardener in this, that he not only tends them personally, and that at a disadvantage, but he has raised them and grafted them himself.

In this garden, ere we quit it, the visitor will further observe that it can produce a good Yew hedge, for there is one here going up 9ft high, and the same in breadth. What a growth! And how long was it in developing these proportions? This I cannot tell. That Mr. Drew has plenty to do, and has many drawbacks, no one who has been over the fourteen acres of college grounds and gardens will controvert, and that he does his duty well, will also be undisputed. His vegetable quarters, his fruit trees, lawns, and his long flower border bespeak an anxious, assiduous man, and what I have told of the soil and aspect further emphasises the courage he evinces in his labours.—H.

HYBRIDISTS AND "HEREDITY."—In a recent lecture Mr. Bateson said that hybridists were all limited in their operations by the laws of heredity. To everyone it was a personal question—What had he got from his forbears?—How much was he likely to imitate the qualities of his parents? The means they had of solving this problem were based on the discovery that Mendel made. That discovery was, in the cases of the crossing of Peas, that each germ cell would carry, not whole characters of the parent that produced it, but some of them. The first problem was—What were the laws that governed the segregation of characters? The second was—What would happen when these different types met each other in fertilisation? It often happened, he added, that hybrids produced, instead of two parental types, a whole series of types, and that each had a different behaviour in heredity. These were, for the most part, forms with which the practical breeder was concerned, and by knowledge of their properties he would be able to fix such types as he needed with certainty.



Cattleya Schilleriana Lowi.

This form of a handsome Orchid was certificated in 1892, Messrs. Low and Co., now of Bush Hill Park, Enfield, being the possessors. The sepals and petals are green, and are thickly furnished with brown spots. The lip is pale purple, streaked with white. The throat is tinged with yellow. It is a pleasing and desirable variety.

Rare Orchids at Kew.

The editor of "The Orchid Review" remarks: "Several very interesting rarities are now flowering at Kew. *Dipodium pictum* is producing another spike in one of the warm houses, where also may be seen a fine plant of the remarkable *Bulbophyllum grandiflorum* bearing seven flowers, the rare *B. mandibulare*, the curious little *B. saltatorium*, with a feathery lip, like a miniature *B. barbigerum*, the striking *Trias disciflora*, *Saccolabium penangianum*, and *Liparis disticha*, the red flowers of the latter being rather unusual in the genus. *Phalænopsis Esmeralda* is represented by five flowering plants; and a pan of *Habenaria carnea*, containing several plants, is very effective. Among plants which cannot be called rare may be mentioned *Paphiopedilum Charlesworthi*, *P. Spicerianum*, *P. x Maynardi*, *Phragmopedilum x Sedeni*, and *P. x calurum*, all of which are flowering freely and are very effective.

"Among showier things may be mentioned a nice lot of *Dendrobium Phalænopsis*, *D. formosum*, *Lælio-Cattleya x Nysa*, *Vanda Kimballiana*, *Cattleya Loddigesii*, *C. Aclandiae*, *C. Eldorado Wallisi*, *Miltonias*, &c., which collectively make a fine show."

The Week's Cultural Notes.

Pleiones will by now have finished their growth in most cases, and water must be withheld almost entirely. The roots usually die off naturally as the foliage falls, consequently the water will be useless. As the flowers develop in the young growth roots again make their appearance, and no time should be lost when once the flowers are past before giving new compost. Some growers use large flat pans for their Orchids, but they are even prettier in small pots or baskets, many a group being brightened through November and December by pots of the pretty *P. lagenaria* in full flower around the edge.

Fibry loam and chopped sphagnum, with a liberal sprinkling of finely broken crocks and charcoal, form a good compost, and the surface of this must be kept just below the rim of the pots. In shaking out the old bulbs and repotting, considerable care is necessary that the young roots just starting are not injured, while if these can be anticipated it is naturally all the better. But this cannot always be, as they sometimes appear before the flowers are past. Leave a little of the old roots attached to the bulbs, as this will help to stay them in position and allow the base of the bulb to just rest on the surface of the compost.

From two to three weeks will elapse before any root moisture is necessary after repotting, the longer time being in case of very cold weather. In no case must it be given until the roots are starting freely. Where a collection is grown, the time for these operations will vary in accordance with the time of flowering, but the procedure is practically the same with all the species. *Miltonia vexillaria* is still growing strongly, and must not be checked for want of water at the roots, but as the atmosphere is now moister the supply will not need to be so often repeated. Other species, such as *M. spectabilis* and its varieties, *M. Clowesi* and *M. cuneata*, will probably be finished, and very little root moisture will be needed.

There is still time to repot late plants of *Cattleya Dowiana aurea*, *C. gigas*, *C. Hardyana*, *Lælio-Cattleya Dominiana*, and nearly related kinds, and, of course, while re-establishing themselves root moisture will be needed, but earlier plants that have finished their growth must have the water supply much reduced. *C. Warneri*, or the spring flowering *labiata*, as it is called, will soon be starting to grow again, but only a limited supply of water is necessary, as well as a light, sunny position, to induce as hard and vigorous a growth as possible. The fact of making its growth at the dullest period of the year militates a good deal against the well-being of this beautiful and distinct plant.—H. R. R.

The Alpine Garden.

This branch of English flower gardening, which throughout the whole year never loses its charms, has nevertheless at this season lost that brilliance and effectiveness which are charac-

teristic of it throughout the spring and early summer months. It would be well, therefore, now that the autumn is advancing, to lose no time in carrying out any alterations or replanting that it may be necessary to have done. There can be no question as to the advantage of autumn planting over that of spring, for given a fine autumn, or even let the autumn be what it may, the plants rapidly make new roots, and by the advent of severe weather are well established; which is an immense advantage when the season of growth and activity returns. It is true a few plants may be lost during hard winters, but this is more than counterbalanced by the progress which the survivors have made.

The occupants of a rock garden will not, as many have found out, continue to grow and flourish in the same position for an indefinite period without soil exhaustion taking place; consequently, the plants become weak and gradually dwindle away, and we wonder why they don't succeed. An occasional lifting and manuring or renewing of soil does not appear to enter into the calculations of many people; yet it is essential if we would have the best results. It is probably owing to this fact that there are so many failures, not only with Alpines, but with other plants as well, which are put into a given position and expected for an unlimited time to give good results without further trouble, except the merest routine. As soon as it becomes evident that a plant, or group of plants, is on the decline they should



Cattleya Schilleriana,
var. *Lowi*.

be promptly removed, taking out the soil to the depth of 18in, replacing by good loam, leaf soil, peat, and grit, as the needs of the plants require, with the addition of small pieces of chalk or limestone for those that need it.

In order to meet the demand for young plants occasioned by exhaustion, change of plans, and other causes, it will be necessary to systematically propagate a number of plants each year. For some plants division will offer the only means of increase; others which are known to come true may be raised from seed, but in some cases this is a slow process. For the greater number of plants, however, cuttings will form the best means of increase, and should invariably be employed for varieties of the same species; by so doing the different varieties are kept true, there being no variation from the parent plant, as is often the case with seedlings. For this purpose a cool, shallow frame will be required, into which should be put a few inches of loam, and leaf soil, and over this a layer of 2in of sand.

The cuttings may be taken as procurable from April until September, inserting them 2in apart and carefully shading. As they become rooted pot them up into small pots, and plunge in coal ashes until such times as they are required. By this means a supply of young plants will be forthcoming each autumn to replace those that it has become desirable to remove. It is only by continuous replanting and careful attention that we can keep our rock gardens stocked with healthy and vigorous plants, which by their wealth of bloom and beauty of form and foliage, will repay us for our care, and gladden our hearts throughout the four seasons of the year.—S. P.



Roses at Waltham Cross, Herts.

The visitor to the Royal Nurseries of William Paul and Son can see Roses in flower at all seasons of the year, and the out-of-doors display in late September is quite rich and plentiful. Notwithstanding rain and winds, the flowers are exceedingly fair, firm, and full. The record of our visit there pertains more particularly to the novelties, to which attention was drawn, and the fact that good flowers were carried by many of them points to the fact that the autumnal character is well developed. Naming a few that linger in the mind, a prominent place must be accorded to Earl of Warwick, a lovely flesh-tinted-and-rosy flower, with salmon glow, of beautiful pointed shape, smooth petals, and large, firm flower. The title was suggested by the Earl himself, who was greatly charmed with this fine seedling. It seems likely to be vigorous, and in all ways good.

In the same line with this was Countess Cairns, a distinctive variety of a pale rose, shaded delicate pink colour, the flowers well held up, long in form, and strong, good shape. Mr. Arthur W. Paul speaks highly of it.

Dainty is a gem, the colour being of a delicate, soft primrose, unequalled for softness of tone, and the other parts of the petals are prettily suffused with carmine. The flowers are round and plentiful, making a good show when massed in beds, (T.) And another bedder, which we are certain will come to the front, is Morning Glow, a Tea Rose, of dwarf branching, robust habit, producing reddish growths, and a heavy erep of exceedingly rich-coloured little flowers. These are of a rosy-orange combination, the deeper tones, as crimson, being blended, so that the flowers are much in keeping with autumnal resplendency, and will harmonise with a background of reddish-coppery shrubs and trees. This is not carrying a colour scheme too far; by no means, for our shortcomings as planters are that our plans and arrangements are too trivial. They lack amplitude and detailed connection.

Along with it, one cannot forget another newcomer, but which has already "taken hold," and that is Soleil d'Or, whose habit of growth in the nursery rows may be mistaken for the Manetti Rose. This fact will confirm the reader of its vigour and handsome wood-and-foliage growth; while all who saw the grand golden masses (I should say, golden-orange crimson) of cut flowers presented by some of the competitors in decorative classes at the Temple Rose Show this year, will be at one as to its gorgeousness. The latter is just the right word to use, for the blossoms glow in their intensity and fulness of colour. It is, as most are aware, a hybrid of the Austrian Briar.

Passing on one hand a great rampant mass of the new Waltham Rambler, it was at once apparent that this, at least, was no consumptive, and what a splendid plant it is, with its huge panicles of rich pink single flowers having a pure white centre! These, of course, were not to be seen in the third week of September, but all through the summer its yield is certainly heavy. Near by, on the left, we have a hedge, a round-backed hedge of the new Golden Queen, a lovely flower, after the Rêve d'Or type, but; like that beautiful Rose, seemingly rather shy in flowering. The growth will cause no anxiety, at least not on the point of delicacy, and the plentitude of dark crimson shoots and foliage is alone very handsome at this season. It may be remembered that we figured this Rose in July, 1901. Maréchal Niel out of doors is very strong and healthy at Waltham. And a third good yellow climber is found in Billiard et Barré, a robust Tea, with effective golden-yellow flowers, decidedly one of the best.

It is well known that Mr. Arthur W. Paul takes every opportunity to vaunt the decorative merits of the species of *Rosa*—*rubrifolia*, *lucida*, *rugosa*, *virginiana*, *Harrisoni*, and others, and the most ornamental of them could be noted side by side in the nursery brakes. It is incomprehensible why such a comparatively limited supply of these fine subjects find their way to the gardens of English estates. The double pink flowered Mercedes, a *rugosa* hybrid, and Conrad Meyer, can each be used to grand effect.

Sir William Jackson Hooker.

(Continued from page 291.)

"In 1808 my father undertook a much longer journey in Scotland, accompanied by his friend Mr. Borrer. On this occasion he reascended Ben Lawers, Ben Lomond, Ben Cruachan, and Ben Nevis; and for the first time Schichallion, Ben Hope, and Ben Loyal. After visiting Mr. Brodie of Brodie, they went to Caithness and the Orkneys, returning to Sutherland. In a letter to Mr. Turner he thus describes their reception in Sutherland:

"We did not leave North Sutherland with the good wishes of the inhabitants, at least the lower-classes of them, most of whom took us for French spies; or, what is worse in their estimation, sheep farmers. Daniel Forbes, who so often acted as our guide, was advised by some to conduct us by the worst way possible; by others he was told that he might be better employed. Our lad heard some saying that we ought to be flogged and sent out of the country. They have not the least idea of persons travelling for mere curiosity, and could not be persuaded that we were not come to do them some ill.

"The journey through the north of Scotland was performed mainly on horses or ponies, and the difficulties met with were such as can now be experienced only in the out-of-the-way parts of the globe. . . . In 1809 Sir Joseph Banks, hearing of an opportunity for a naturalist visiting Iceland, where he himself had been in 1772, suggested my father's taking advantage of it. This he did, and all the more eagerly from having as a boy read Van Troil's 'Letters on Iceland,' with a longing to visit the hot springs and volcanoes therein described. The opportunity was the despatch of a vessel, the 'Margaret and Anne,' with a letter of marque, chartered by a London firm, Messrs. Phelps & Co., for the purpose of obtaining a cargo of tallow. The venture was a risky one, for Denmark, to which country Iceland belonged, was at war with England; and the firm were enticed to undertake it by a Danish prisoner of war, Jorgen Jorgensen by name, who was now for the second time about to break his parole and accompany the ship in the interest of the firm.

"The 'Margaret and Anne' sailed on June 2, and on arriving June 21 at Reikevik, Jorgensen, finding that commerce with England was prohibited, effected a revolution in the island, proclaimed its independence of the Danish crown, and himself its 'Protector,' imprisoned the Governor, Count Tramp, erected a fort armed with six guns, equipped troops, remodelled the laws, established representative government and trial by jury, reduced the taxes, and raised the salaries of the clergy; all without shedding a drop of blood or an attempt at resistance on the part of the people!" We here omit an account of Sir William's reception, and with regret, the relation of exciting events connected with his return. His ship, the "Margaret and Anne," was set on fire by Danish prisoners of war who were on board. "Unfortunately, the fire broke out on a part of the ship where his collections were stored, and he lost everything but a few weeks of his journal, the clothes he stood in, and an Icelandic lady's wedding dress which the ship's steward flung into the boat as she shoved off from the burning wreck.

"Soon after his return, and yielding to the wishes of his friends, he commenced writing his 'Journal of a Tour in Iceland.' On hearing of this Sir Joseph Banks most liberally offered him the use of his own manuscript journal and various other papers relating to the island, together with the magnificent drawings of the scenery, dresses of the inhabitants, &c., which were made by the artist who accompanied him in his voyage in 1772. With these materials, his own journal of four weeks out of twelve which he passed in the island, and a retentive memory refreshed by a reference to all available works and all documents relating to the revolution, he compiled and printed, for *private distribution only*, in 1811, an octavo volume of upwards of 400 pages and four plates. Sir Joseph Banks was so pleased with it that he induced my father to reproduce it for publication. The second edition with additions in two volumes, with two maps and four plates, dedicated to Sir Joseph, appeared in 1813, and is to this day a standard work.

"The years immediately following my father's return from Iceland (1809-12) were the most embarrassing of his life. His unquenchable longing to travel in the tropics was kept alive by Banks's earnest endeavours to find him a fitting opportunity. On the other hand, his botanical friends were unanimous in urging him to remain at home, publish his Icelandic and Scottish journals, continue his aid to Mr. Turner on the 'Historia Fucorum,' and above all proceed with his 'British Jungermannia,' his drawings and analyses of which were of unrivalled beauty, and his contemplated 'Museologia Britannica.'

We next read that Sir William became partner with Mr. Paget (father of the late Sir James Paget) and Mr. Turner in a brewery at Halesworth, but, omitting some detail, may pass on to say that this did not check either his botanical ardour or desire to visit the tropics. "In 1810 he sold his landed property and determined to accept an invitation which Sir Joseph had procured for him, of accompanying Sir Robert Brownrigg, G.C.B., the newly appointed Governor of Ceylon, to that island. . . . To his bitter disappointment this opportunity had to be put aside, for disturbances, followed by a rebellion, had broken out in Ceylon that would have rendered travelling in the island impossible." Disappointment still followed, a contemplated visit to Java having had to be put aside. "My father was hence compelled to confine his wanderings to nearer home, adding gardening to his pursuits, and this with some success, for he was the first to flower *Cattleya labiata* in his little stove in 1818, and he also flowered *Musa cecinea*, and other tropical plants."

(To be continued.)



Pear, Nouvelle Fulvie.

This is undoubtedly one of the finest dessert Pears, and is ripe from November till February. The flesh is sugary, melting and juicy, and highly esteemed. The fruit, which is of medium size, changes to yellow when ripe, and on the sunny side particularly becomes dotted with russet, and frequently becomes rich crimson. We are able to figure a fruiting branch, by the kindness of J. R. Pearson and Sons, of Lowdham, Notts.

Pear, Olivier de Serres.

This French-raised Pear is another of the gems of our own home gardens, having the qualities of late keeping (February to March), a buttery, sweet flesh, and good as standards or pyramids, the latter, of course, preferred. As a wall plant, too, it crops well. Messrs. Pearson's illustration shows its fruitful character. The fruit is not large—2in to 3in wide, and 2½in high, and the skin is entirely covered with cinnamon-coloured russet.

Budded Lilacs.

In order to increase the newer varieties of Lilacs rapidly, nurserymen bud them on the California Privet. This gives perhaps fifty times as many as could be raised by layering in the same time. As many persons prefer that their Lilacs should not be over-large, the Privet stock furnishes what is wanted, the Lilae not growing as robust on it as when on its own roots. There is a tendency in the Privet stock to throw up shoots from the base, as a Manetti Rose will do, and this is an objection, though one not formidable. By cutting out all the eyes of the stock before planting, it ends the trouble. It can be met in another way—by planting the bushes deep enough that the stock is well underground. Very rarely is there any shoot on it then. It is sometimes desired that the Lilacs be on their own roots instead of on the Privet, even though budded on this stock. This can be accomplished by deep planting. Set the plants so that the true Lilae shoots are several inches under ground, and in the course of time roots will emerge from the Lilac, just as often occurs with dwarf Pears. Should anyone have plants already planted, dig them up and set them lower. It is the only way, unless practicable to mound soil about them. No doubt a little slit cut into the Lilac wood, just as would be done if about to layer it, would cause roots to form quickly.

Hardy Fuchsias.

To those who have travelled in California the sight of hardy Fuchsias of almost tree size is a pleasing and interesting one. The same is true (writes Joseph Meehan, in the "Florists' Exchange," America) of many portions of the South, free from more than a very few degrees of frost. Almost any Fuchsia will live outdoors if well protected with forest leaves about the roots; even here in the cold North. But the tops will be destroyed, the new growth coming from below the line of leaf protection. In the extreme south of England many of the more tender sorts get through ordinary winters unhurt, while the hardy varieties of *Macrostema* are quite hardy. The well-known *Riccartoni* is one of these, making big bushes, which are a grand sight in summer. Many cottages have it trained to the walls, the branches extending to the roof just as is seen in California. This variety, *Riccartoni*, is fairly hardy in Philadelphia. A few leaves placed around it on the approach of winter secure it, and when in a sheltered place it has been known to carry through the winter unharmed a small portion of its unprotected branches. Through July, August, and September the *Riccartoni* flowers profusely when in a damp, partly shaded place, a situation all Fuchsias demand. The native home of these hardy Fuchsias is Chili, which accounts for their hardiness above other kinds that have come from Mexico and other warmer countries. I was reminded to write of this, the hardy type of Fuchsia, by seeing a row of the variety *Riccartoni* in a Philadelphia florist's garden. The plants were in the perfection of health, and were fairly hidden beneath their wealth of flowers.

Calceolaria 20ft. in Circumference.

It is said that in the garden of Godolphin Vicarage, near Helston, Cornwall, there is a yellow *Calceolaria* which has attained the circumference of 20ft. It presents an attractive spectacle, as it is laden with a profusion of yellow flowers. It has never had any protection, and has been out of doors for the last seven or eight years.

Pink Rambler Rose, Lady Gay.

This Rose was raised by M. H. Walsh, of Woods Hole, Mass., U.S.A., and has been illustrated in the American journals. The variety shows much the character of *Crimson Rambler*, in luxuriance of flower and foliage, but the blooms are of a pleasing shade of pink.

"Geraniums" in Boxes for Garden Decoration.

A very pretty effect is to be seen at a farmhouse a few miles out of Exeter. Fronting the house is a strip of orchard ground, and placed here and there on the grass is a number of boxes containing large red *Geraniums*. There are a few other flowers about—*Dahlias*, &c.—but the mass of *Geranium* blooms at once arrests the eye, and compels one to make a closer inspection. The advantage of the boxes is, of course, that they can be removed at pleasure, or utilised in any way which the owner may desire. Here is a garden which is not a garden in the strict sense of the word, but it looks very pretty.

Giant (Horse) Mushrooms.

Writing to the London "Daily Express," the undersigned says: "The Ipplepen Mushroom of 36in circumference and its King's Lynn rival of 41in are relatively small compared with one which I have seen, and of which I hold the signed record of half a dozen witnesses, including myself. This Mushroom was found by my father's groom, William Parker, in July, 1871, in a field of mowing grass at Great Barr, Staffordshire. Its circumference was 63in, and that of the stem 9in; while the thickness through the flesh of the Mushroom was 4in. I have not heard of any authenticated instance of this size having been exceeded.—J. R. YATES, Colville Gardens, W."

A Model Fruit Room.

We believe that Mr. George Bunyard was the designer of the first fruit room of the pattern shown on page 316. Messrs. Veitch and Sons, Ltd., Chelsea, have favoured us with the representation of the fruit store in their grounds. The roof can either be thatched with straw or heather. The walls are of deal, with half a foot of air-space between the inner and outer boarding. The windows are set well back, and can have shutters in front. The floor is of earth, and the ventilation is mainly from the ends and the top. The stages for the fruits are 1½ft apart, with ½in interspaces between the boarding for proper dryness and the passage of air. These shelves are usually covered with selected straw, which lies with straight-lined stems, evenly. Properly made, these fruit houses will last two or three generations or longer, and suitable fruits can be kept soundly till May and June each year.

Transplanting Evergreens Now.

With the soil warm and moist, as it is at this writing, says Mr. J. Meehan, it would be as safe to move Evergreens with balls as it would be to set out pot plants; there would be no risk at all. The time is here, in fact, when Evergreen planting of all kinds may be considered. With favourable conditions October is regarded as a very good month for the work. At this writing the soil is damp and the air cool, and no better conditions could be desired. Even Evergreens without much ball attached could be shifted, with fair hopes of success. If an Evergreen can be moved and then tided safely over a week following, it is pretty sure to live. Unless under most unfavourable conditions, it should not be impossible to keep it up for a week. The main thing is water. Flood it with water when first planted; keep it soaked for a few days until it is well settled, and it will grow. The flooding compacts the soil better than pounding and treading it, hence is to be preferred. The more ball a tree has, the better it will do always; in fact, unless Pines have either been already shifted or root-pruned, it is difficult to get them to do well transplanted at any time. Still, if not large specimens, their transplanting might be attempted now, as well as that of other Evergreens.



Apples and the Recent Gale.

I had business at Crediton on the 10th of September, and I had to take shelter in an arbour built under a large Blenheim Orange Apple tree. "Surely the roof is coming off?" I said to the parson. "O dear, no; it is only a few of the Blenheims falling on the roof." We have too many tall standards in this windy and rainy county of Devon. We need to plant more bushes. I was at Salcombe, about two miles from Bolt Head, the highest and most rugged coast in Devon and Cornwall, the day following the storm.

After tea with Dr. Twining, the gardener showed us over the fine fruit grounds. When we reached the bushes, but yesterday laden with fruits, the gardener, pointing to the Apples, said: "I owe this to you, sir; we never had fruit like this until you came here four years ago, and I left the Apples on the land, because I wanted you to see the crop that the trees have borne. You see what the storm has done!" About half the produce was on the bushes, and half on the land. Had the fruit been on orchard trees, perhaps nearly all the crop would have been on the soil. The bushes had been well thinned, and summer-pinched, thus giving a passage to the wind; and so much of the crop remained.

Here one has some of the advantages of growing Apples on the Paradise stock as bush trees. This view should induce growers to put many more such trees on their properties or holdings during the coming autumn. I am planting, this autumn, a large lawn, in a high position at the seaside, with the idea of a permanent orchard; but many bush Apples will be planted between. The owner wants an orchard, which is quite right, for he will thus protect his gardens. Yet he will never get the best fruit: dwarf trees alone can produce it. To buyers: Go early and select your trees. First customers carry off the best trees.—X., Devon.

A Great Fruit Nursery.

Knowledge of the manifold operations necessary for success in fruit culture, and of the risks that are faced by large nursery firms who grow trees by the tens of thousands for sale, makes the visit to such a nursery as that of George Bunyard and Co., Limited, at Maidstone, of the highest interest and pleasure, as well as educationally helpful. Flat after flat, stretching to fully ninety acres, are covered with young fruit trees, each a replica of the other, and each a sermon by itself, as Prof. Drummond would have us see. But to remain practical, and leave philosophy for the divines, our attention will be devoted to the record of a visit made a week ago to the Allington Nurseries. These, as I note, extend to ninety acres of undulating ground, well exposed, and therefore admirably suited to furnish hardy, vigorous, well-seasoned stock. The soil is the finest in Kent, an ideal sandy loam of a reddish brown colour, that in every way tends to the production of fibrous rooted trees and bushes, which is so essential to the safe transference and thrifty growth of the subjects from nursery to garden or orchard.

The recent gales have slackened some breadths of juvenile Apple trees; but this will work out for good after a season when growth has been rampant and needs a timely check. The slackened trees, of course, will again be firmed by treading. Here and there, where a stout stake had left an unfilled hole, one was able to see the fleshy white root tips that lately had encircled the stake, which fact goes to show how active the root system is, and how speedily young, vigorous trees will "take hold" if planted while yet the soil is warm and moist.

NEW APPLES, AND OLD.

In going round the quarters, I asked my companion what account certain new varieties of Apples were giving. Foster's Seedling (1895) was one of these, and though stated to be hardly fit for dessert, it is a wonderful cropper, as becomes a seedling from Cellini Pippin. Golden Spire, I may say in passing, never fails to give a crop, not even in a year like the present, and I saw shapely pyramids laden with the yellow fruits.

Hambling's Seedling (1894) resembles the Blenheim, but on young trees it does not fruit freely. Early Peach (1894), "in the way of Irish Peach," bears out the catalogue remarks; but the Charles Ross has not been tried sufficiently long at Allington to enable the firm to speak of it from personal experience. James Grieve, "an early Cox's," and a hardy variety, is summed up in the sentence: "Good in every way; we think highly of it."

Young trees of Allington Pippin (sent out from here) were exceptionally clean and vigorous, making long, stout shoots, well set with fruit buds toward their base. Eaten when taken from the tree, the flavour of this Apple is of the best: juicy, sweet, and satisfying. Ribston Pippin, of course, will long remain a favourite, though I was informed (and this was new to me) that some folks imagine its popularity is declining, and have even evinced surprise to see such large breadths of it in the nurseries. It fails, of course, when old, being subject to canker. The recently introduced Russian Apple, named Bielo Borodawka, is well set.

One point, and a great point, is the high keeping of the Allington nursery, for neither weeds, prunings, or old stock are allowed a place. The scarifier and hoes are constantly kept at work; bodies of men move about among the trees as surface-men do on a railway track, and with a similar object, to prune, straighten, dress, and mend.

The King Pippin has been very vigorous this year, and makes a distinctive showing with its bluish green foliage. Cox's Orange on the Paradise, as yearling plants, are 3ft and 4ft high, and are good stuff. It is a mistake to plant Cox's in large brakes alone, as we fear has been recommended in places, for the failure of a variety is always possible, and more so if alternate rows of other varieties are not present to afford the cross pollination. "W. R. Raillem," whose garden I saw recently, has not a perfectly healthy Cox's in his place, the leaves being scourged with the rust which so peculiarly and constantly attacks this variety. He has grafted it upon Blenheim Orange and other varieties, but without lessening the affliction; and this is a drawback.

Standard Cherries, and, indeed, Cherries in all the modes of training, are a leading feature here, for the supply of the Kentish Cherry orchards; and in the journey by rail I had evidence of a considerable amount of recent planting. The Kent men are alive to the necessity of renewing their trees long before they are unproductive, and in this they show an excellent example to their brethren in the Brentford, Isleworth, and Hounslow districts of Middlesex, whose bogey for years has been the builder.

These standard Kentish Cherries are 7ft and 8ft high, with very shapely heads, the young shoots being spurred back to two or three eyes until the second or third year from the working, when they are let away, and require only moderate pruning. One of the nursery brakes contained 30,000 Cherry trees. Plums as standards, wall trained, or as pyramids were here in ample numbers, and of all-round merit.

If any reader of these notes visits Allington, he would do well to inquire for what may be called the "test orchard," the area where bush Apple trees are grown for the purpose of testing their merits over a series of years, and in order to provide a means of comparing one kind against another, as well as for the production of fruit for exhibition and other purposes. The object of the visit would specially be to see how well opened the centres of these trees are: quite like a great funnel, which allows the fullest admission of sun, air, and dew to work their beneficent changes.

ORCHARD HOUSE TREES.

The orchard house culture of Apples, Pears, Plums, Nectarines, and Peaches is carried out on a large scale, and a great number of the handsome dishes of Apples shown at Chiswick on Tuesday last have come from shapely trees grown first in a great span-roofed house, and latterly placed out of doors under a wire netting screen to finish off. The orchard house culture of Apples on a large scale is expensive, and though the size, colour, and beautiful appearance of the fruits are very comforting, the flavour is not quite equal to that of a cracked old Cox's from a scraggy orchard tree. This would seem to put a premium on "scraggy orchard trees"; but when a man handles and eats a magnificent Peasgood's or Gascoigne's sample, he hesitates to complain if the flavour falls short of his expectations, as judged from the outside.

The orchard trees, I may observe, are all excellent subjects, bearing well, and having nicely modelled forms. There are large numbers of all kinds in pots, plunged in the open ground.

Figs in pots receive the keenest attention, and pot trees, wall trees, and standard trees are kept in numbers suitable to the demand. The Royal Gardens were able to be supplied with standard Figs from the houses here when no one else could provide the stocks, and this tended to the firm receiving the Royal Warrant. Pot Vines form a department by themselves, and these are grown at Maidstone, the headquarters of the firm.

NUTS, AND FILBERTS, AND MIRABELLES.

The large quantities of Nuts seen in town shops now and later are mostly grown in Kent, and to meet the supply there are thousands of young bushes at Messrs. Bunyard's. The firm is engaged to plant four to five acres with Nuts in Buckingham during the present autumn, and the demand for Nuts is pretty constant. The differences of Cob Nuts and Filberts may be

subject to argument if it were worth while. The general definition is that the Cob is not covered by the husk, while the Filbert is. The old Kent Cob is still the best for general use.

The French Mirabelle or Cherry Plums are sometimes seen about in gardens where they are planted as ornamental dwarf trees, but their fruiting is precarious. The fruits are showy, and are sold in considerable quantities in the shops. Bullaces and Damsons, equally with the Cherries, cover many acres.

ORNAMENTAL TREES AND SHRUBS.

But while many scores of acres are under fruit, there are perhaps as many more containing Conifers and ornamental flowering trees and shrubs. The common Yew for hedges has been lately in great demand and the plants here range from 2ft to 3½ft high, being well clothed, bushy, and full of vigour. Those who are planting Abies might find a good subject in *A. Kosteri*, which is similar to *A. pungens glauca*, but has a better reputation at Allington. *A. glauca pendula*, in its young state, is not far removed in appearance either, and it, too, might find a place. One of the best of the Cupressus is *Triomphe de Boseop*, a glaucous form of bushy, elegant habit.

The Shrubby Trefoil has not a great deal to commend it, though, when its clusters of fruit with greenish - primrose coverings, are freely borne, it has some effect in a shrubbery. A warm soil and sheltered position would seem to suit it best. The common Bay or Laurel, as well as the best of the Aucubas of a suitable size for planting, are here; and I was surprised to see so many variegated Acor Negundos, and Maidenhair Trees. Weeping trees are seen in all sizes, some of them 10ft and 12ft high, as were others of the trees, but these older ones are mostly sought after by people well on in years, whose desire is to plant for immediate effect. Beeches, Elms, Ashes, Willows, Birches, are all to be had in the pendant or weeping form. The Tulip Tree also does grandly on the Maidstone soil; and the same applies to Catalpas.

Large numbers of fancy Hollies had just been budded on the common Holly, and elsewhere there were nice young bushes. The golden Poplar is seldom seen, nor is the fine-leaved *Acacia*, named *angustifolia*, much in evidence. The Swamp Cypress, which is deciduous in winter, is cultivated in greater numbers than I had expected to see. *Parottia persica*, and *Celtis canadensis*, the latter with nettle-shaped leaves, are each worthy of attention.

The Hibiscuses are not at all shy in the grounds here, and quite a list of notable varieties could have been taken, each of them very good. The well-known *cæruleus* is certainly one of the best, and an unnamed white Hibiscus, with a dark eye, was another that specially attracted. The continental growers are, however, continually sending out so-called new varieties.

Rhododendrons are bushy and well studded with flower buds; attention being also called to the new Rhododendron-like shrub named *Daphniphyllum macrophyllum*, which has stood through five winters. The plants grow in rounded, bushy form, and have somewhat glaucous leaves. The Hypericums are a class by themselves, and I recently, in these pages, gave a list of the best of them as grown at Kew. The fine-leaved Sumachs (*Rhus*), that colour so gorgeously at the present time, deserve to be planted ten times more liberally than they are, and the same may be

said of the Azaleas. *Ligustrum Quilioni*, though of rather a loose habit, is nevertheless a grand autumn-flowering shrub, having showy white panicles of bloom. *Sambucus tenuifolia* (a fine cut-leaved form), and the golden cut-leaved Elder, used sometimes in bedding, are only two of a number of good varieties of this genus. *Viburnum acerifolia* and *Cornus san-argentea*, a species with leaves that are coloured a white and purple mixture, would be welcomed if better known. There is also a goodly selection of bright-skinned *Salixes* or Osiers, of which the best known are *S. dasyclados*, *daffnoides*, *Salamoni*, and *vitellini*. The eurb-leaved *S. annularis* (syn. *tortuosus*) is interesting if not beautiful. But there is no end to the shrubs if one was to name and describe even a decimal of the best kinds.

ROSES AND HERBACEOUS PLANTS.

Messrs. Bunyard cultivate acres of both Roses and hardy plants, and it must suffice to say that all the newer Roses of which we have recently heard, are being grown, together with popular sorts. Irish Beauty, the large white single, is doing best out of Dickson's trio in this line; and Gruss an Teplitz is also as profuse here and elsewhere. The dwarf Madame Levassieur, a polyantha with purplish-crimson clusters, was flowering freely in the open a week ago.

In the herbaceous grounds a few of the best subjects were *Senecio pulchra*, with long, stout stems, terminated with purple flowers of an inch and half diameter. This noble late flowering *Senecio* deserves some care, and its great needs are a warm soil and sheltered position. *Campanula muralis* *Elatines* is a variety seemingly with larger bells than the type, and is equally as profuse. This species is a gem for rockeries at the present season. Amongst the *Tritomas* or *Montbretias* were *Solfaterre*, with soft yellow racemes, and this is rather a refined variety; *Eldorado*, of a deeper yellow, and more robust; *Etoile de Feu*, very free, with large crimson flowers; *Globe d'Or*, a good golden



Pear, Olivier de Serres. (See page 305). J. R. Pearson & Sons.

form; and lastly the ever useful and beautiful *erocsmæflora*.

PERENNIAL ASTERS.

So good were these, and the selection in my eyes so meritorious, that they deserve a separate head. Messrs. Bunyard are always adding to their collection, and weeding out the sorts that are superseded. Aster John Wood has pure white, large flowers, and grows 3½ft high. Edna Mereie is a showy rose-pink; Daisy Petts is another large flowered white, and quite distinct; F. W. Burbidge is rosy-lavender, 4ft; Cottage Maid is paler than the foregoing, and very free; Edith Gibbs has exceedingly graceful, fine wiry growth, and small pale blue flowers; Margaret, a Maidstone seedling, grows 5ft, and has fine lavender flowers tinged with rose, and is 1½in across. *A. puniceus pulcherrimus*, growing 6ft, is very suitable for the wild garden; *A. tomentosus* has pale mauve blossoms; *Amellus macranthus*, 2ft, has massive flowers and spreading inflorescences. Royalty also is good.

THE HEAD OFFICE AND NURSERY.

The centre of the business is at Maidstone, and round about it there are seven nurseries of varying size, each belonging to Geo. Bunyard and Co., Ltd. The firm touches all branches of outdoor nursery stock, and the florists' side of the trade is not neglected. If Allington falls to be visited again, as it surely will, something must be said of the bog and alpine plants, the Bamboos, Reeds, Grasses, Ivies, tender exotic plants, Violets, tuberous Begonias, Oranges, and many other subjects.—J. H. D.

NOTES & NOTICES

Ipswich Gardeners' Mutual Improvement Association.

This society will commence its winter session upon October 1, when Mr. W. Seabroke, of Chelmsford, will discourse upon "The Culture of Apples and Pears, and their Commercial Importance."

A Notable Gardener.

Mr. William Shand, a well-known authority on horticulture, died at Lancaster on Wednesday in his sixty-sixth year. He was a native of Banchoory, Kincardineshire, and was head gardener to the late Sir Robert Duff, Fetteresso Castle, Kincardineshire, and to the father of the present Lord Lonsdale, Lowther Castle, Penrith.

Rare and Curious Trees.

Mr. H. J. Elwes, Colesborne, Cheltenham, writes: "It frequently happens that rare and curious trees which blow down or die are used as firewood, or sold at firewood prices, because no one takes any interest in them. As the uses and value of the timber of some exotic trees is little known in this country, I am collecting specimens for experiment. I shall, therefore, be much obliged to any of your readers who would be so good as to inform me of anything uncommon which they may come across, and shall be willing to pay the full value for short logs or planks of such trees as I want. Samples of them will be sent by me to the timber museum at the Royal Gardens, Kew, or to the Forestry Collection of the Surveyors' Institution if desired. Any particulars or measurements of unusually large or rare trees in Great Britain or Ireland will be gratefully acknowledged."

Appointments.

Mr. D. Bliss, head gardener at Roundhay Park, Leeds, as superintendent of the parks and open spaces at Swansea. * * Mr. W. Earp succeeds Mr. Geo. Sage as head gardener to the Marquis of Camden, at Bayham Abbey, Lamberhurst. Mr. Earp's successor is Mr. W. A. Cook (late of Compton Bassett), who thus goes to Shirley House, Shirley, near Croydon, the residence of Col. Simpson. * * John MacLellan, for the past thirteen years at Weston Manor, Otley, Yorks., to J. E. Riley, Esq., Arden Hall, Accrington, Lancashire. * * W. J. King, fruit grower at South Lodge, Horsham, Sussex, and formerly general foreman at Warren House, Stanmore, Middlesex, as head gardener to Lord Dunleath, Ballywalter Park, Co. Down. * * Mr. Henry Durnford, late gardener at Stanmore Hall, to be head gardener to R. M. Caulfield, Esq., Broadhanger, Petersfield. * * Mr. F. Tapper, gardener to Sir Samuel Scott, Sundridge Park, has removed to Westbury Manor, Brackley, Northampton, still with Sir Samuel Scott.

Horticulture and Character.

In a recent talk before the Michigan State Horticultural Society, N.A., Hon. Charles W. Garfield entered a plea for the subordination of commercialism in horticulture. He believed that the tendency to measure everything by the dollar or by the margin of gain was not calculated to raise the ideals of life. We make the following extracts from Mr. Garfield's address: "In reviewing the history of horticulture in our country we find that the men whose names are most highly respected as leaders in the movement are those who paid the least attention to the question of whether this fruit, or this movement, or this tendency, would bring more dollars into the pocket than another. The main thought has always been with these leaders, 'Will our art, developed in this way, reach a higher standard of influence for the betterment of mankind?' Note the names of the men who have built upon this foundation: Marshall P. Wilder, the family of Mannings, the two Downings, Warder, Thomas, Lyon, Hexamer, and the two Saunders of Washington and Ottawa, Furnas, Babcock, Tracy, Burbank. I could name many others, like Barry, Ellwanger, and Meehan, who have achieved commercial success, but their names are written with these others because of their influence in the realm which stands above commercialism."

The Largest Tree in Switzerland.

The largest tree in Switzerland is to be found in the Melchthal, perched on the mountain side, at a height of 450ft. At the base it measures in circumference 40ft. The circumference of its trunk six feet from the ground is 26ft, and one of its branches is 4ft in thickness. The diameter at the top is 84ft. This mighty giant of the forest shows great signs of age, but is in a perfectly healthy condition.

Weather Notes from Hamilton, N.B.

The somewhat terrific gales which visited the British Isles a week ago appear to have been the climax of the year's meteorology. Here, at all events, the weather has taken a decided turn for the better. We have, at present, the very best conditions that could be desired, plenty of sunshine and pleasing breezes. Frosty mornings, however, succeed the bright sunshine. We have had it hard enough to kill many flowers and vegetables. Nevertheless, we are glad to refrain from grumbling, in case we shall be again visited with the vengeance of the rain and storm fiends.—D. C.

August Weather at Belvoir Castle.

The prevailing direction of the wind was S.W., total thirteen days. The total rainfall was 5.09 in, this fell on seventeen days, and is 2.43in above the average for the month; the greatest daily fall was 2.10in on the 24th. Barometer (corrected and reduced): highest reading, 30.186in on the 6th at 9 a.m.; lowest reading, 29.077in on the 15th, at 9 a.m. Thermometers: Highest in the shade 75deg on the 8th, lowest 42deg on the 22nd; mean of daily maxima 65.32deg, mean of daily minima 50.38deg; mean temperature of the month 57.85deg; lowest on the grass 37deg on the 22nd, highest in the sun 128deg on the 6th; mean temperature of the earth at 3ft, 57.25deg. Total sunshine, 145 hours 30min, which is 20 hours 12min below the average for the month; there was one sunless day. The above mean temperatures are all much below the average for August, but are not so low as in August, 1902.—W. H. DIVERS.

Frames and Glass Copings.

The illustration, on another page, of frames and wall-tree shelters, shows some of the types made by Mackenzie and Moncur, the hothouse builders of Edinburgh, to whom we are indebted for the use of the block. Good frames are always serviceable, and never more than during winter and spring, when much of the bedding material is tided-over in them; and Lettuces and Violets, too, are grown in quantities in frames and pits. The chief points are that they should be drip-proof and have certain conveniences for ventilation if they are span-roofed. The wall Peach-case and the glass coping are well worth all the trouble and outlay they may cost, for often the lack of them (as in a season like the present) means the entire loss of a crop, and with it a year's labour. Is it not, therefore, advisable to protect the finer fruits—the Pears, Gages, Apricots, Cherries, Peaches and Nectarines? Even Grapes (Royal Muscadine and others) could be made successful with only a little protection, and it is well to consider what may be done in one's own individual case.

Preservation of Old Trees.

The subjoined hints have been contributed to the "Hereford Times":—When an old tree is seen to be losing vigour, and there is no apparent cause, it may be presumed that the soil has become exhausted and is unable to sustain the tree in vigour. The soil ought then to be removed from the roots for a radius of 15 or 20 feet from the stem, great care being taken not to cut or damage the roots; the soil removed to be replaced with fresh soil—old turf if it can be had and well rotted farmyard manure, mounded up round the stem a foot or more, and well watered. I have seen the above treatment tried with good results in every case. Old trees which are hollow (if it be possible to get inside them) should have all the decayed wood scraped off the inside of the stem, and painted over with green tar and pitch, which acts as an antiseptic and helps to stop decay. The dead and dying branches ought to be removed close to the stem with a saw, and painted. Every hole in the tree that would admit of water lodging should be filled with pitch. Where the tree is forked and there is danger of the one part breaking away from the other, all the superfluous branches should be removed in order to lighten that part and lessen the tendency of splitting. The judicious use of iron bands and bolts is of great help in keeping some old trees together.

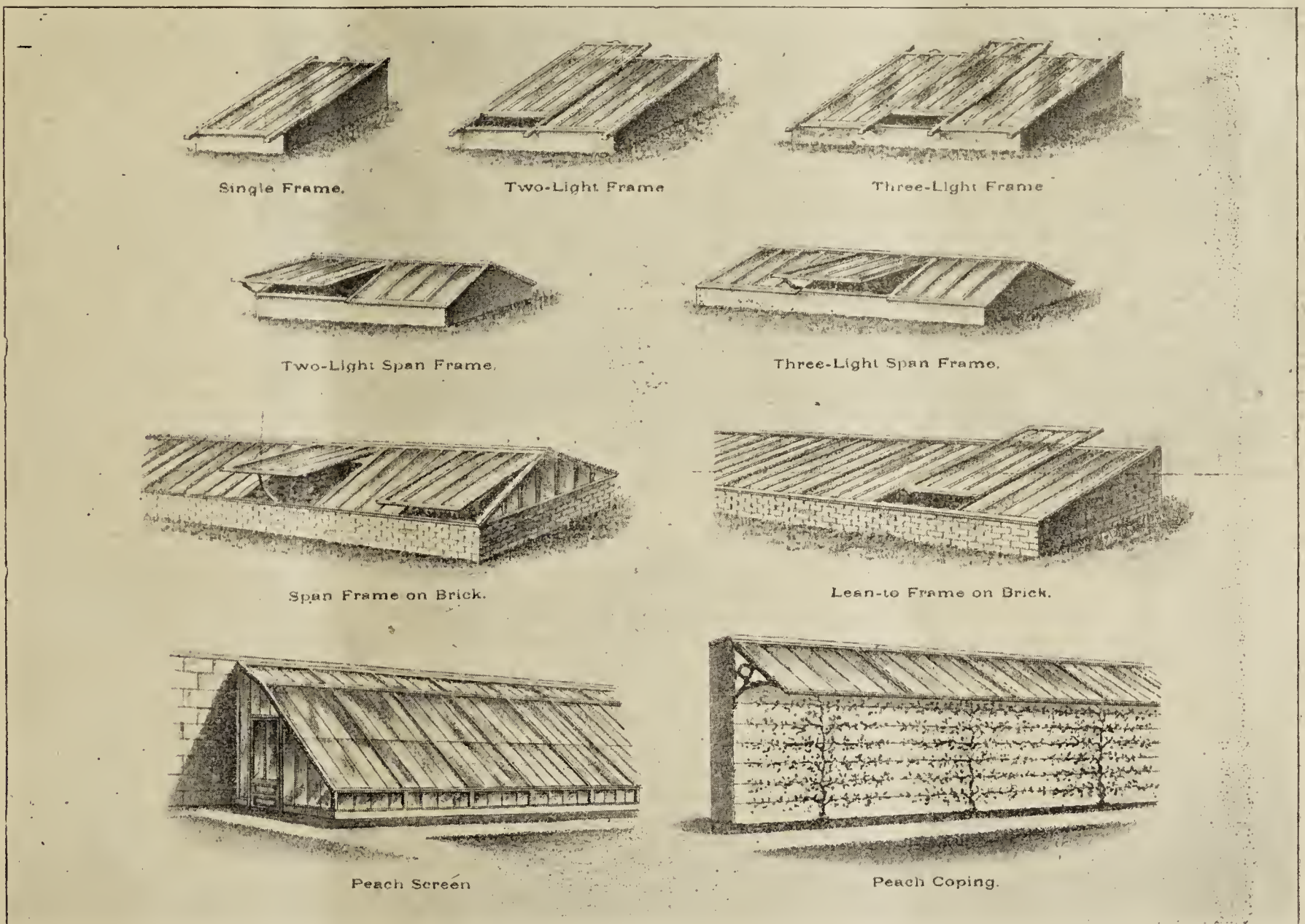


National Chrysanthemum Society, September 21st.

The Floral Committee of the Society met for the first time in the present year at the Essex Hall, Essex Street, Strand. Mr. D. B. Crane was elected chairman for the year ensuing. Two flowers only were submitted for awards, viz., Japanese, J. A. Humphrey, pale yellow; in the younger flowers there is thrown over the florets a tint of delicate pinkish salmon, which

first prize to Mr. Swanwick on the ground that he had got together a more varied collection. W. Wells and Co., of Earlswood, Surrey, sent several varieties of new Chrysanthemums. Mr. Charles Hibbert, of Sherwood Rise, also lent an imposing group of plants, effectively arranged by his gardener, Mr. J. W. Newton.

In the arrangement of the show, the committee, with Mr. C. J. Mee as chairman, and Mr. F. Husbands vice-chairman, had displayed commendable taste, and the secretarial duties were courteously discharged by Mr. G. E. Skelhorn. Upwards of 100 entries were received, and the following gentlemen acted as judges: Mr. W. Wells, Earlswood; Mr. H. Weeks, gardener to Lady Byron, of Thrumpton Hall; and Mr. Goodacre, jun., Elvaston. The opening ceremony was performed by the president (Ald. C. Bennett). The chairman said that the artisan gardeners in Nottingham would bear favourable comparison with those in any other part of the kingdom, and the show was a striking testimony to the excellence of their work. Ald. Bennett remarked that, having regard to the season, the



MacKenzie & Mcneir

Frames and Wall-tree Shelters. (See page 308.)

is not so apparent in the older ones; it is a deep, full flower, with long, broad florets, recurving at the base, and curling at the points (commended); and Holme Sumner, a bright, deep yellow incurved Jap, the basal florets curling at the points, fine in colour, but rough as shown.

Nottingham and Notts Chrysanthemum Society.

The annual exhibition of summer flowering Chrysanthemums, fruit, and vegetables, under the auspices of the Nottingham and Notts Chrysanthemum Society, was held at the Arboretum rooms. The winning collection of Chrysanthemums was boldly and effectively staged, and comprised fine specimens of all the leading varieties. In point of merit the second group was not far behind, but it lacked something in arrangement. Some difference of opinion was aroused in respect of the collections of outdoor cut flowers of any variety, for while the winning group was, perhaps, more representative, Mr. Wright's exhibit was of obviously superior quality. No special conditions had been imposed in the schedule, however, and the judge awarded the

quality of the exhibits was extremely good, and reflected very great credit both upon the exhibitors and the committee who had organised the show, and he sincerely wished them every success. Mr. W. Wells said that he had never seen anything to equal the summer flowering Chrysanthemums grown in Nottingham, and he rejoiced to know that the artisan gardeners received such help and stimulus from the Corporation.

THE GLADIOLI AT CORNELL.—Recent visitors to Cornell University, U.S.A., have been charmed by the display of Gladioli in the horticultural trial grounds. There are some 6,000 bulbs in the collection. It has long been the policy of the horticultural department to select different flowers and make a systematic study of the various species. During the past nine years Cannas, Dahlias, Sweet Peas, Geraniums, and Asters have in turn received careful attention. This season the Gladiolus was selected for study, and bulbs were sent in by all the leading hybridisers.

Methods of Floral Decoration.

A progressive movement in the arrangement of floral effects has been manifest to all observing admirers of the blending of colour and the graceful clustering of Nature's most beautiful gifts.



Pear, Nouvelle Fulvie. (See page 205.)

J. R. Pearson & Sons.

The incongruous massing of flowers regardless of harmony of colour, ignoring surroundings where it is desirous to produce an artistic effect, is frequently the cause of failure and disappointing results. Church weddings of the present day are certainly an improvement on the decorations of long ago, which is no reflection on the ability and refined taste of the operator of the past. Lacking the material from which to select for pleasing and beautiful effects, set designs of decapitated flowers entered largely into the arrangements. Specimens of the graceful and stately *Kentia*, with its dark, rich foliage, contrasting in colour and characteristic habit with *Areca lutescens*, the expansive foliage of *Latania borbonica* and other natives of the tropics could not then be obtained in stately specimens, as to-day. One of the most important factors in church wedding embellishment is the proper grouping of the magnificent Palms, elevated to the proper height, not in a conglomerated mass, but grouped to show individuality and graceful habit.

In the floral arrangements, cut flowers with long stems are now, and should be, used wherever most effective; the sacred altar and chancel decorated with a tasteful profusion of white flowers and *Asparagus plumosus*; columns or arches garlanded with the same attractive green, or perhaps, which is more pleasing in a large hall or church, the glossy foliage of southern *Smilax*, introduced in the north a few years ago and now almost indispensable to the floral decorator. The *Lycopodium* or Christmas green roping which was considered very essential in days of yore is now almost obsolete, except for the Christmas festivities. The decoration of the home for the wedding festivities has been somewhat revolutionised. We seldom behold flowers contorted in such emblems as Cupid's darts, bows and arrows, or balls of flowers massed in solids and suspended in some prominent place in the drawing rooms. The ancient wedding bell appears to be the only reminiscence of "Ye olden time," and its apparent fascinating influence on women justifies the belief that the old emblem may continue to ring joyfully for many moons to come.

In the modern treatment of the house the same conditions may be adhered to as in the church or hall, the grouping of the plants, artistically arranged in the parlours in a selected corner, forming a bower, giving sufficient space for the performance of the wedding ceremony and for the bridal party to receive their congratulations. The wire frame in the shape of a canopy, covered

with green and wired flowers, has lost its popularity, and is now supplanted by the dignified Palm. The banked mantels of growing *Adiantum* interspersed with long stemmed Roses of one colour, arranged in a loose and natural habit, is much more attractive than the ancient formal stereotyped arrangement, where so much wood and wire entered into the construction. Garlands of

Asparagus plumosus or *Smilax* entwined on mirrors, and also effective Orchids with stems in water contained in small glass tubes, to prevent wilting; vases of long-stemmed cut flowers of distinct colour, harmonising with decorations of the different rooms to be treated, are preferable and more artistic than the former everyday basket arrangement, even if the durability of the flowers were the only consideration. It is gratifying to observe there is less ribbon used in conjunction with floral decorations than formerly. While ribbon embellishment is not objectionable sometimes, on floral designs, it is somewhat out of character garlanded with flowers and *Smilax* in the drawing-room decorations.

The construction or arrangement of the bridal bouquets of previous years was formal and compact. I will not reflect so far to the past as to refer to the *Camellia* and *Tuberose* bouquets of thirty-five

years ago, with a border of Bristol board paper surmounted by an edging of silk fringe, but contrast the progress in floriculture of later years. The introduction and growing of improved varieties of Roses, Orchids and novelties of every family all assist the artist in forming the beautiful and graceful bouquets of the times.

The treatment of the residence for receptions or dinner entertainments is somewhat similar to decorations for the wedding celebration. Illustrating the decoration for a modern festivity we cannot do better than describe in detail one of the many which came under our own consideration. Groups of Palms arranged for best effect, were relieved by cut branches of *Forsythia Fortunei*, *Spiraea prunifolia* and *Pyrus japonica*, forced for the occasion, and loosely arranged in concealed vases of water. Mantels and mirrors were banked and treated with the same flowering shrubs, all producing a very pleasing effect. Stairways profusely garlanded with *Asparagus plumosus* and *Forsythia* led to the main floor, where the dining room, library, parlours and conservatory were thrown into one great dining-room. The tables, which seated 300 guests, were constructed to order, the centre portion built separately, six inches below the outer sides for the placing of growing Orchids in pots. With tubs concealed under the tables, the trunks coming through 12ft apart, specimens of *Dicksonia antarctica* 8ft in height were utilised, their tropical and graceful fronds producing an admirable and tasteful decoration. Hidden and suspended in the fronds by flexible wires were many glass tubes of water, each containing sprays of *Cattleyas*. Growing Orchids embellished the mantels: festoons of *Asparagus plumosus*, interspersed with *Cattleyas*, beautified the mirrors; and the conservatory in the background had brilliant colours of potted *Azaleas*, sheltered as it were, by the overhanging branches of tropical foliage, completed one of the most original and elaborate decorations of the season.

Now as to the accomplishment of success in these "modern methods." It must be remembered that these results can be attained, so far as artistic effects and charming designs are concerned, without any expensive and elaborate process and with even limited means at one's disposal. If one has the love of flowers and the soul of the artist within him, as every florist worthy of the name should have, the "modern methods" become a delight. It would be an interesting study to consider how, under efficient supervision, the modern methods will be utilised in working out the perfected accomplishments in decorative floral and horticultural achievements, that will make our country in this respect, the admiration of others!

* Paper prepared for the Milwaukee Convention by Alexander McConnell, New York.

Melons at Longleat.

It is many years since Mr. W. Taylor instituted the system of growing Melons in the Longleat Gardens on what is commonly understood as the extension system of training, and I cannot myself recall another instance where the same success attends the practice. Successive gardeners who have in turn held the important charge during all those years have conformed to the adoption of this principle, because by it fine fruits, unfailing succession, and high quality are thereby obtained.

Probably each in turn, prior to their coming to Longleat, found the orthodox methods to suit requirements, for it is well known that few adopt the extension as compared with that of restrictive methods of growth and fruit. Generally speaking, from three to six fruits are considered ample for a Melon plant to carry to perfection, and more often than otherwise the maturity of these exhausts the plants that bear them. This is not so, however, with plants allowed a freer head and root provision, for eighteen or more fruits have been counted, all in differing stages of development, on one plant, and how many more than this number it is possible to obtain is beyond my knowledge. This number I have actually counted myself, and am therefore witness to the truth of the fact.

Formerly but two varieties were cultivated at Longleat, the old, but now seldom heard of, Cashmere, and Eastnor Castle. The first-named was of such vigorous habit, and under leaf restriction such a signal failure, that the extension system of training was probably adopted as an essential necessity to avert that disappointment which past efforts had given in this particular kind. Since that time it has been amply demonstrated at Longleat and elsewhere how suited is this principle of training for other kinds.

The late Mr. Pratt, by the inter-crossing of Eastnor Castle with Meredith's Cashmere, produced a fine Melon, afterwards named Longleat Perfection. It had but a short career, however, probably because this also demanded a greater freedom of lateral than many were disposed to give. Neither kind has much patronage now, being superseded by such an ever-changing introduction of certificated novelties.

High quality provided in those old-time Melons had a fame which time only has made less appreciated. The common cry of to-day is that Melons possess such an indifferent and uncertain quality. In those days at Longleat, when fruits were taken from healthy and vigorous plants, this flavour question never had a test, nor was raised by comparison. The same rule holds good now, though modern kinds find favour to a much greater degree than at that time. Mr. Gandy, the present head gardener, provides fruits in numbers and quality that still possess that uniformity of quality and appearance, so much prized on the table of his noble employers.

This, it must be admitted, does not necessarily arise from the severe limitation to one or two kinds. This practice has been tried and found wanting; for while one variety is early or quick in bringing the first fruits to maturity, others demand more time. This Mr. Gandy has overcome by adopting experimentally a change of stock. Gunton Scarlet has for some time been a favoured variety, and right well has it deserved the precedence given it as regards appearance and quality; but a restriction to one kind provides an after thought, inasmuch as neither the first fruit, nor the constant supply, is rendered so conspicuous a desideratum as demand and necessity require. Every Melon grower realises that one kind will under precisely the same treatment mature at least a portion

of its crop some days in advance of another, and the value of such progress can only find its true appreciation when the yearning for summer fruits has to be appeased, or there is a competitive race with one's neighbour.

Sutton's Triumph and Veitch's Late Perfection are kinds that it is hoped may help to provide a continuity of succession rather than a number of fruits that must of course be stored for indefinite periods in the fruit room awaiting use. Anything tending to "ease up" the weekly supply is deserving of more than passing thought and provision, and this question appears to be one that has engaged, and still does engage, the mind of the respected garden chief at Longleat.

The soil here would appear to be eminently suited to the requirements of the Melon, as also are the structures in which they are grown. Fertilising of the blossoms, though it is scarcely necessary, is attended to in their season as a safeguard against failure; but when other conditions favour, no anxiety need be felt for the assurance of a successive advance of the embryo fruits, as the lateral-bearing growth produce them. It is not usual for Melons to set their fruits unaided, but their cultural treatment at Longleat would seem all-sufficient.

Loose brick walls are made to enclose the soil for each separate plant, and not more than three are ever planted for the main crop in summer. As they advance in leaf and root extension soil can be easily given by taking down the bricks and setting them out a distance of, say, 6in to 8in wider all round, to be filled in with new loamy compost. Beyond lime, nothing of a stimulating nature is requisite in the soil, and the vigour of the plants, the size and number of advancing fruits, speak in eloquent language, favouring cultural detail and surroundings.

I am told that one plant can easily be made to fill a compartment measuring quite 30ft in length, the growth issuing from the main leader radiating laterally along the roof wires, and these in turn furnishing the successive fruiting growths. It need not be repeated that only close application to their daily needs, and the periodic linings of new soil, are items that must not be neglected to ensure the high state prevailing.—W. S.

Apple. Golden Pippin.

Dr. R. Hogg has quite a treatise on the head of the Golden Pippin ("Fruit Manual," 5th Edition, p. 91); but we are only con-



Apple, Golden Pippin.

cerned with a few facts about the variety. It is a very old one, being the "small Golden Pippin" referred to by Parkinson, and is an esteemed dessert Apple, though excluded from a number of nurserymen's lists. The fruit is small, about 2in wide and the same in height, of a rich golden yellow. The flesh is crisp, juicy, and sweet, and the fruit is in season from November till April.

Fruit Show and Vegetable Conference at Chiswick.

The late editor of this journal, Robert Hogg, LL.D., in the introduction to his book on the Apple, wrote that fruit culture was almost an entirely neglected study till about the fifties of last century. Owing to his own great efforts, and to those of Francis Rivers, J. R. Pearson, and Mr. Blackmore in our own country, and equally ardent men on the Continent, fruit culture, and the study of varieties, has been almost raised to the level of an exact science.

But much of the ladder has to be climbed yet, and past achievements are but the stepping stones for what lies before us. And while fruit is justly attracting the brain and skill of the best men in horticulture, that other great department of gardening which is embraced in the raising and production of the finest culinary vegetables, is as yet only in the awakening stage. The Royal Horticultural Society is therefore acting up to its opportunities in having the present conference on vegetables and exhibition of kitchen produce. The success attending the meeting is recorded in our report; and we hope that these labours may become an annual necessity, that the present may be the first of a long series of annual joint fruit and vegetable exhibitions. But one chief thing is necessary if this is to be so, and that is—MONEY.

The Council, in a preface to the schedule, say that they "have consented to this exhibition on condition that those interested in the promotion of British fruit and vegetable growing would combine to subscribe a sum of not less than £200 towards the prize money and general expenses, which are estimated at a cost of £350 or £400." Not a very large sum seems to have been subscribed, if we judge from the list of donations given. Messrs. Sutton and Sons show an excellent example by contributing £25; Messrs. Bunyard and Co., Ltd., give 10 guineas; W. Horne and Sons, £10; J. R. Pearson and Sons, prizes and £1 10s.; C. Sharpe and Co., Ltd., £10; J. Veitch and Sons, Ltd., £10; and these are the chief presentations.

Chiswick, the scene of so many great horticultural meetings, is a splendid centre, accessible from all parts of London, and the Council had printed full directions for visitors to get there. This, probably, is the last of the long series of Chiswick shows, and, if so, it closes a passage of splendid, if troubled, history.

In order to include as many vegetable classes as possible, those hitherto devoted to single varieties of fruit had been somewhat curtailed. Every available place in the Chiswick Gardens, even to the entrance porch, which greeted one with a display of Onions and other vegetables, was utilised on this occasion, and the great vinery furnished a magnificent display. A luncheon was given by the Council at one o'clock when Mr. T. Humphreys was presented with testimonials on his retirement from the assistant-superintendship of the gardens here. The Gardeners' Dinner at Holborn Restaurant, in the evening, was attended by 400 men from all parts of the country, and Lord Duncannon occupied the chair, owing to the illness of Mr. Leopold de Rothschild, who had been expected.

THE CHISWICK LUNCHEON.

A very large number of gentlemen dined at the invitation of the Council, Sir Trevor Lawrence, Bart., in the chair, who was supported by Sir Thos. Hanbury, Dr. Cooke, N. C. Cookson, Geo. Bunyard, Prof. Henslow, W. Bateson, Owen Thomas, R. Dean, F. W. Burbidge, D. P. Laird, H. B. May, and others.

After the loyal toast, Sir Trevor, amid prolonged and loud acclamations, announced the award of the vacant Victoria Medal of Honour to Sir Thomas Hanbury, the donor of the Oakwood garden to the Royal Horticultural Society. Sir Thomas replied in a few well-chosen words. He asserted that what he had done was to save a unique and beautiful garden.

The chairman then gave the toast of "The Committees," and mentioned that very shortly the gardens would be vacated, and continued his address to briefly dwell on a few chief events of the Society's history, which are more or less known to Journal readers. Sir Trevor stated that he had attended Chiswick shows for sixty years, and in his peroration, gave a touching farewell to old Chiswick. In proposing the toast to the Committee he coupled the names of Mr. Bateson, E. Molyneux, and W. Crump.

Mr. Bateson, in his reply, asked whether some new and great beneficial departure could not be made when the new Wisley garden is taken over. The horticultural industry, he said, was unique among the arts, in that science was not coupled with practice, not to the same degree as in the brewing and iron industries. May the taking on of Wisley not be used for the determination of the hybridisation experiments that are now so paramount? This would be a work worthy of the Society, and earn the gratitude of naturalists throughout the whole

world. Mr. W. Crump and Mr. Molyneux also spoke. The latter said, in regard to the vegetable exhibition, "that a better display of these had never been seen in creation," which evoked laughter, even though it was unchallenged.

PRESENTATION TO MR. T. HUMPHREYS.

Then came a very pleasant duty, the handing to Mr. Humphreys of a beautifully illuminated address, which was read by Richard Dean, and offered by Wm. Marshall. The horticultural Press also presented a testimonial through Mr. Gordon. The text of both addresses is here given:

From the R.H.S. Committees.

"This address, together with a cabinet canteen of cutlery and silver and a Queen Anne tea and coffee service, is presented to Mr. T. Humphreys, secretary of the Floral Committee of the R.H.S., by those whose names are appended, in warm appreciation of his services to the Floral and Fruit Committees of the Society, both at the Drill Hall, Westminster, and at the gardens of the Society at Chiswick. They desire to congratulate Mr. Humphreys on his appointment as Curator of the Botanical Gardens, Edgbaston, Birmingham, and cordially wish him and his family good health and increasing prosperity."

The address was signed by seventy-three subscribers. It was beautifully prepared, with symbolical emblems of the various Committees, crowned with a growing tree, to represent the Society.

From the Press.

"On your retirement from the Royal Horticultural Society's historical garden at Chiswick, the undermentioned representatives of the horticultural Press desire to offer you an expression of their good wishes. They acknowledge with appreciation and thanks the courtesy and assistance you have freely afforded them at the Society's exhibitions, and on other occasions; and they beg you will accept the accompanying roller-top writing desk, with their autographs engraved upon a plate, as a token of their wishes for the future health, happiness, and prosperity of yourself and family. They hope that the work you will do in the Edgbaston Botanical Gardens at Birmingham will succeed in further popularising the art of gardening and encouraging a greater love for plant life. Signed, E. T. Cook, H. G. Cove, C. H. Curtis, J. Harrison Dick, John Fraser, A. S. Galt, Geo. Gordon, Maxwell T. Masters, F.R.S., F. Moore, R. Hooper Pearson, W. P. Thomson, H. H. Thomas, H. J. Wright, and W. P. Wright."

Mr. Humphreys expressed his heartfelt thanks for the kindnesses he had received, and referred to the amiable relations that had always existed between himself, the Council, the Committees, and all with whom he had business, and he took comfort in knowing that so many eminent horticulturists had wished him God-speed in his new sphere.

THE CONFERENCE.

Hardly had Mr. Bunyard opened the Conference on Vegetables than the rain poured, and continued more or less all the evening. Three papers were read, and these we briefly summarise.

"SUPPLY OF VEGETABLES FOR A PRIVATE FAMILY."

BY MR. W. H. DIVERS.

Mr. Divers described the houses, pits, and frames he uses and recommends for vegetable culture. A store-room is also a necessity, and for all crops this should be cool, but not quite dry, except for Potatoes, whose delight is a cool, dry atmosphere in the store-room.

Describing the kitchen garden, he said that a deep soil was very necessary, and his experience on sandy, loamy, limey, and other varieties led him to prefer the Northampton red sandstone soil. This he had worked 3ft deep, as soils, wherever possible, should be. Turnips, however, never succeeded on this kind of soil, which was good for all other vegetables. He was hardly able to employ superphosphate on this formation. With reference to heavy clays, he thought an ordinary lifetime scarcely long enough for a man to make them good-workable tilths.

A kitchen garden sloping to the north is often badly suited for crops. The culinary area is generally walled in, the walls being 10ft to 12ft, and choice fruits are grown thereon. Hedges of Holly or Yew were objectionable, as was the near presence of large trees, because of the ingress of their roots, robbing the garden soil. The size of a kitchen garden depends on the

number of persons to be served, an acre being equal to the needs of ten people. Belvoir Castle, the gardens of which Mr. Divers has long presided over, contains seven acres within the walls, and seven and a quarter acres outside, with four acres of orchards in addition. The proportion of the above total of fourteen and a quarter acres of cultivated ground used for vegetables is two and three-quarter acres; two and a quarter acres are used for fruits of various kinds; and the remaining nine and a quarter acres are occupied by vineries, plant houses, frames, bedding-plant-ground, paths, hedges, &c.

Of vegetables, the following proportions are grown, taking the unit as 37 square yards: Asparagus stands at 32 square yards; Artichokes, 8; Beans of various kinds, 15; Brussels Sprouts, 14; Broccoli and Cauliflowers, 14; Cabbages, 17; Carrots, 14; Parsnips, 3; Beet, 4; Celery, 27; Horseradish, 8; Leeks, 3; Kale, 4; Peas, 36; Potatoes (early), 15; Potatoes (midseason), 50; Seakale, 14; Spinach, 9; Onions, 19; Savoys, 20; Turnips for autumn and spring, 9; and the remainder is occupied by Shallots, Garlic, Salsify, pot herbs, &c. Turnips are grown between rows of Peas; Lettuces are grown between Celery; summer Spinach between Peas; and a few other things in a similar manner.

In rotation of crops it is not always possible to follow a strict rule; but the lecturer gave a few broad principles in this matter. Leguminous crops are followed by "green" crops, such as Brussels Sprouts, which require more soda, lime, and sulphates than Peas and Beans. As Potatoes demand much potash, a suitable vegetable, not requiring this, must follow them, as Onions.

The well-known, but oft-to-be-repeated rules with regard to sowing and thinning, were touched upon. Mr. Divers advised the sowing only of the finest seeds, from reputable seedsmen; as bad seeds yield plants that fall prey to all the diseases the genus is heir to. Thin seedlings early. He had known a brake of Carrots ruined through having been left a fortnight over time. Then, size in vegetables was not the chief point to be considered. He placed quality first, and second, a continuity of supply. Show vegetables, he thought, are not appreciated by the consumer. Nor was heavy manuring desirable; it perverted the highest quality. Brussels Sprouts and the whole Brassica tribe could be greatly assisted by 3oz per square yard of superphosphate, and 1oz of nitrate of soda, supplied at a good growing period, and other chemicals used in conjunction with dung were to be commended.

In conclusion, Mr. Divers had something to say on varieties. Rely on thoroughly tested kinds, was his advice, especially where a large supply has to be maintained. The seedsmen were blamed for offering too many varieties, and it had become a practice for every seedsman to prefix his or his firm's name and title. It was annoying, to say the least, to find old varieties sent out under new names. This he appealed against. The chapter on varieties was not read.

MR. BECKETT ON EXHIBITION VEGETABLES.

The redoubtable Aldenham grower, who is an all-round gardener of mark, read his paper in double-quick time, yet so clearly that his audience heard and followed all he said. He naturally supported the exhibition aspect of vegetable culture, and went on to show that size is not the alpha and omega of an exhibitor. Beet is coarse, and no good if very large; yet Celery could be juicy, succulent, and sweet even when at its largest: it cannot be too large. Leeks, he said, should at least have 12in of blanched stem, and be 6in in circumference, without any bulb—even throughout. The Leek demands great care in culture, and therefore should point high on the boards. The highest culture is absolutely necessary also for Mushrooms; but Cucumbers are often shown much too large.

The character of the ground to be dealt with should be clearly understood; and no piece of ground should be cropped for two years in succession with the same subject, Onions being an exception. These may be grown on prepared beds year after year. The time to trench has been, and is, a matter of controversy. Mr. Beckett seconds David Thomson's experience, as announced through the *Journal of Horticulture* some years ago, which is, to leave the trenching of heavy soils till the spring, and light soils can be forked over in the winter. The objection is made that time cannot be afforded in spring, but the best and ablest gardeners can always manage their assistance to the best advantage, leaving time for all duties, as they come.

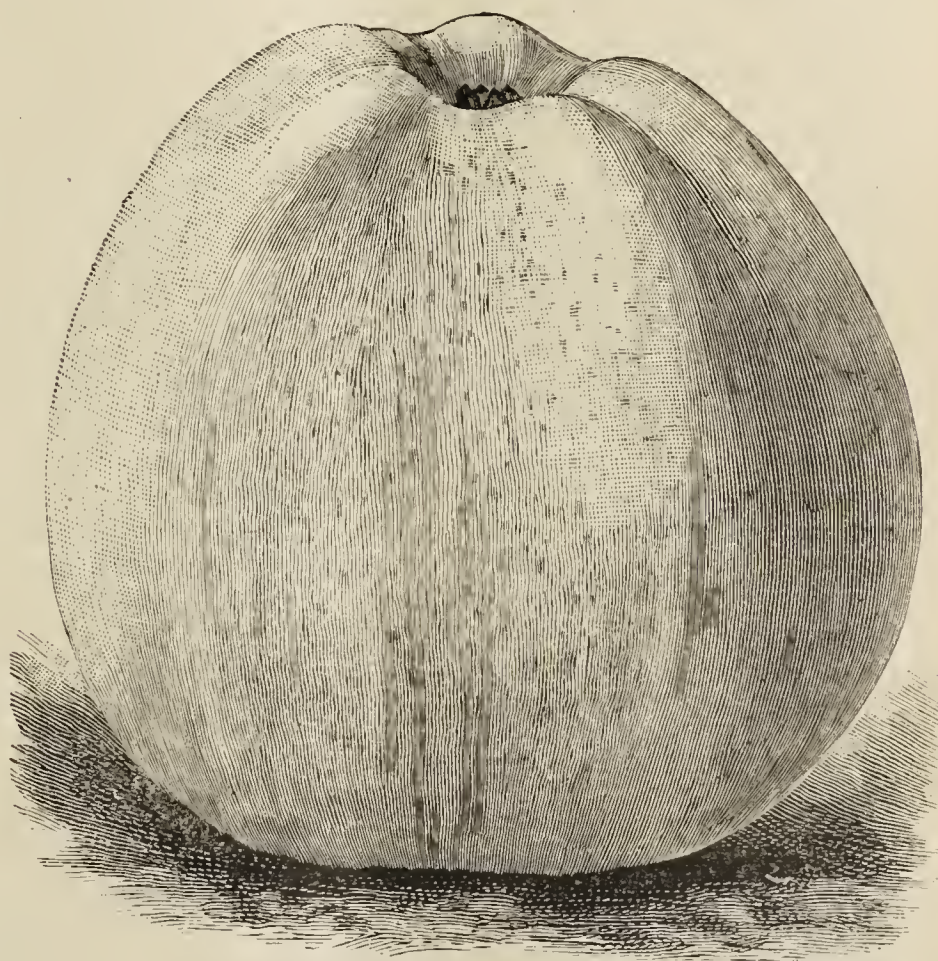
Mr. Beckett explained the various trenching operations, with the proper placement of manure: green, long manure at the bottom, and he always brings the lower spit of soil to the top; no bastard trenching. The ground should be broken up 2ft to 3ft. Previously to planting, the surface should be forked over, and top-dressings may be worked in. In cropping, he makes Beet and Salsify to follow Celery, incorporating a liberal supply of soot, road scrapings, and old mortar rubble (not too coarse), and even after Celery he trenches the ground. Wherever time and labour allow it, he advises the annual trenching of the kitchen garden.

The exhibiting of vegetables was broached, and the renowned prizetaker furnished succinct hints. Some time before the date

of an exhibition the enthusiast will be noting the different specimens likely to be his best, and will mark them with a stick. This saves much time at a later date, and everything can be done to encourage the elect of the crop. Cauliflowers, Cabbages, and Lettuces, if too forward, can be pulled, and hung by the roots in a cool, dark cellar. Cauliflowers should be covered with fresh leaves to preserve the purity and protect them. Slugs should be rigidly hunted for, as damage is speedily done. Parsnips should be left in the ground till the day before the show, as they speedily lose their fresh gloss. The points of Potatoes were discussed, evenness and smoothness being great factors. Large Beans and Peas should be regarded with favour.

A medium-sized oblong hamper is best for the packing. Carrots and other roots that have been washed should be carefully laid on clean, damp mats, and the best packing material is fine wood wool. All items should duly be noted, and labels should be distinctly written for them, these being placed together in an envelope, ready to be attached at the proper time. Plenty of well-washed Parsley should be packed in for garnishing, as this is always useful.

Three hours should be allowed, if the exhibit is a large one, to set up the collection. The essayist went on to describe the place best suited for the different sorts. A central triangle should be made of Cauliflowers, which ought to be included in



Apple, White Transparent.

An Apple in use during July and August, is a good bearer, of general excellence, and very fine in appearance. It is recommended for market, being useful either for eating or cooking. It is comparatively new,

every collection. As each subject of the display is placed in position, it should be covered with tissue paper before going on to set up the next thing. When the collection has been placed in position, the conditions of the schedule must be carefully checked, in order to make certain that everything is complied with. Schedules, said Mr. Beckett, ought distinctly to specify the number of each vegetable desired. This saves confusion and uncertainty. Potatoes, Carrots, Onions, and Tomatoes should be always included in collections if possible, and Peas, Beans, &c., if in season.

MR. LOBJOIT ON THE "MARKETING OF VEGETABLES."

London, in area and population, has outgrown the old means of supply that were adequate when the Georges reigned. There is now scarcely a market garden within ten miles of the City, and they will soon be twenty miles. London is looked on as the industrial centre by producers so far east as Japan, and so far west as San Francisco, and they come in increasing numbers from the Antipodes.

There is reason for complaint in the means of disposal. With one great central market, the suburban greengrocer has to drive

his van in to take back the produce that a few hours previously had passed his own door. This compels him to be up in the small hours of the morning, working in darkness or dim light, and ere the vegetables are disposed of to consumers in the outskirts they are both deteriorated through much handling back and forward, and dear in price. The question is often asked, "Why are vegetables so dear?" One cause is the want of means of adequately gauging the market. It is a fact, too, that the scavenger often carts off many surplus vegetables that have had to be pitched upon the streets, just as loads of flowers are destroyed in the same manner.

The costermonger does a good service by taking quantities of vegetables into densely populated quarters. The system of delivery direct to the retail dealer is slowly being developed. Often, as things are at present, the stock offered by the suburban greengrocer is a libel on the succulent, fresh vegetables that one may find leaving the market gardens. Then, again, local markets must do something to remedy existing evils, and Mr. Lobjoit referred to the local market at Brentford, Middlesex, which allows salesmen in the neighbourhood to attend market oftener than they had done, and so maintain constant supplies of fresh material. "What," asked the lecturer, "is the use of growing vegetables if your market fails you when you have grown them?"

Expenses are now higher, and means of culture are different to what was pursued twenty or more years ago. In Fulham and elsewhere sixpence a rod used to be paid for bastard trenching, and, while Radishes and Turnips used to be sown in drills by hand, they are now sown broadcast. Peas were trained to stakes twenty years ago; now they are never supported; but, of course, all this is to be allowed if good produce can be grown at a cheaper rate.

But the chief bane, or one of the leading points of grievance with the market gardeners is that there is so much knocking about of produce. First the Cauliflowers, say, from the fields go to the carts, then in the markets they are thrown into a heap; back they go into buyers' baskets, and having arrived at the shops, they are thrown out upon benches.

Nothing seems yet to be devised for lessening the large expenditure of getting Radishes to market, taking them but as one instance. The binding of the bunches costs twopence a dozen, and tying another penny, and the marketmen only obtain fivepence a dozen bunches. If a machine could be patented to grade, bind, and assort these and other things a great gain would be effected.

There are two schools of market gardeners—one that grows produce that can bear carriage from a distance, the other where weight of produce necessitates nearness to market, even if the land rent is there; thus the couplet "Land dearer: But market nearer." Rhubarb is never far from market. Certain localities, of course, are greatly famed for certain vegetables, the district being specially suited for them: and Mr. Lobjoit said that the tendency is for the greater centralisation of crops.

As in the case of Mr. Divers' essay, the one we summarise dealt hardly with the iniquities (!) of the seedsmen, the complaint, which was gilded by humorous allusions, being laid against the catalogues with the novelties, all distinct and guaranteed, like the wine lists of hotels. Looking into one catalogue (one taken at random), the lecturer found 116 different Peas, 29 varieties of Beans, and 16 Lettuces.

In continuing, Mr. Lobjoit wanted to know why there was such an inordinate rage for size. Short, crisp, nutty Celery was surely preferable to huge sticks; yet "Best" is market terminology always means largest. The rage for size is most remarkable in Cos Lettuces. If a Cos Lettuce is not large it is not wanted. A dozen of "large" bring 1s. 8d.; of "small," 6d. for 22! Yet, who ever saw a Lettuce sent to table whole? The speculation of late years in Aubergines and other less grown vegetables has been "a bit of a gamble," owing to the sombre seasons.

Mushroom growing, the lecturer said, was now reduced to an exact science. At one time it was common to have excellent crops one year, and the grower could not tell how he got them; and the next, though every care had been taken, the crop would fail. The last words were devoted to cynical references to the Board of Agriculture, which could not make up its mind how to classify the market gardener and his calling. And, speaking of encouragement to marketmen, Mr. Lobjoit said the outlook was bad when a certain society "which shall be nameless here" (the R.H.S.) omitted even to have one vegetable class set apart for the market gardener and his kin.

Dr. Bonavia and Mr. Hudson were both absent, and their papers were taken as read. A paper by Mr. Baker, of Kew, was sent, entitled "The Productivity of Seeds."

THE GARDENERS' DINNER.*

It was said truly that no such dinner as that which we record has been held since 1866. There were fully 400 gardeners and lady friends present, the magnificent King's Hall at the Holborn

* This dinner was quite a separate event, and not promoted by the R.H.S.; but coming on the first day of the meeting it may be allowed as part of the complete programme under our title.

Restaurant being packed to overflowing. Leopold de Rothschild, Esq., was unfortunately prevented by illness from taking the chair, but the breach was filled by Viscount Duncannon, who most worthily acquitted the duties pertaining thereto.

Having partaken of the very excellent repast, the secretary of the Dinner Committee, Mr. A. Dean, read a number of letters from absent gentlemen. One was from the Very Rev. Dean Hole, who is prostrated by illness in North Wales; but the genial Dean sent a characteristic letter, with "an old man's blessing and love for his brethren," and he quoted the words of Mr. Francis Rivers to himself many years ago: "Your delight in flowers will never leave you."

Leopold de Rothschild, Esq., had written from his sick bed, and his most pleasant communication showed how keen was his sympathy with the gardener and the gardener's calling, and he referred to this meeting, which gave old bothyites the means of meeting after long years of separation. And ere the chairman commenced his address under the toast "The Royal Horticultural Society and all other Horticultural Societies," he read a telegram from Mr. Leopold de Rothschild, who wished to add a greeting, and hoped that a pleasant evening would be spent.

The chairman was in his best form, and for twenty minutes held his hearers' keenest attention. He referred to "the hearty handshake from many an old friend" which the present dinner would bring about. He took his audience later to Ireland, where, though there are many poor cottages and poor people, there are likewise many fine gardens and cottage fronts. Lord Duncannon thought Ireland could develop its fruit culture large and small, and be made profitable. He was strong in the praises of his gardener, and of his own gentle partner in married life, who study the garden they have. And almost in his last words the chairman said, and with all sincerity: "If any of you are near my own garden, give me a call, and I shall be delighted to see you."

In responding, Rev. W. Wilks, M.A., Secretary of the R.H.S., had a stirring appeal to make on behalf of the Hall Fund of the Society. He looked back to 1887, when the R.H.S. had only 770 subscribing Fellows, and a debt of £1,200. Now it has fully 7,000 Fellows, and as many pounds sterling per year of an income, plus £450 as revenue on surplus funds. He asked, "Are there not plenty of wealthy people in this country of ours, who, without an effort, could reduce the paltry debt of the Hall, a matter of £20,000?" Yachting, horse-racing, motor-ing, versus gardening. Which?

After several songs, Sir Trevor Lawrence, Bart., rose and gave "Gardening and Gardeners." He alluded to his own younger days, when flowers on dinner tables were altogether the exception. Now rich and poor alike have them. Those cottage fronts, too, that are bright with flowers, are these not the happy homes of England? "How much we owe to our gardeners, and how great are their responsibilities!" Sir Trevor uttered the words as only a true lover of flowers, gardens, and gardeners could. "The art and craft of gardening is under-



Apple, Lord Hindlip.

This was sent out in 1896. It is a dessert Apple, an excellent bearer, of weeping growth, the fruits of capital flavour, coloured a rich russet red. Its season is from January to May.

stood in England in a way not found elsewhere in Europe," was another sentence from Sir Trevor, and he told a story of a visit to Geneva years ago, where he received a present of fruit, a present such as made the waiters and others stare; and these were grown by an English gardener. To the lady gardeners you will extend the hand of friendship, especially if they will leave alone the "plums."

In conclusion, Sir Trevor said that as votes will be flying about very soon, he hoped the claims of so great and good a gardener as Mr. Chamberlain will be recognised.

Mr. T. Challis and Mr. J. McIndoe responded, the former opening his eloquent and high-levelled speech by saying he felt very much as most gardeners did after that dreadful week in last April when they were left "peachless." Notwithstanding the metaphors, Mr. Challis rendered a splendid address.

The remaining toasts (which, be it noted, we were quite unable to report, owing to the uncomplimentary and incessant din which arose from the unnecessarily long and numerous speeches)—the remaining toasts were devoted to the Horticultural Press, the Gardening Charities, the Horticultural Trade, and the Chairman. The speakers were Messrs. H. J. Veitch, A. W. Sutton, Geo. Bunyard, R. Dean, Geo. Gordon, Owen Thomas, Geo. Dickson, C. H. Curtis, H. B. May, and A. Dean.

The tables were beautifully decorated with flowers by Messrs. Veitch, of Chelsea, and fruit came from Mr. Peter Kay.

THE SHOW—FRUIT.

DIVISION I.

Fruit grown under glass or otherwise. Open to gardeners and amateurs only.

Class 1 was for a collection of nine dishes of ripe dessert fruit, six kinds at least. Here there was only one exhibitor in Mr. J. H. Goodacre, gardener to the Earl of Harrington, Elvaston Castle, who was deservedly awarded the first prize. The Grapes were Muscat of Alexandria, Gros Maroc, and Alnwick Seedling, all in first rate form. Pine Cayenne, decidedly small for this variety. The Melons were Thornton Hero and Beatrice Barnes. Peaches were excellent, the varieties being Princess of Wales, Barrington, and Golden Eagle. Nectarines, Albert Victor (grand) and Humboldt. The Apples were good and well coloured. Washington, Ribston Pippin, and King of Pippins were the varieties represented, while a good dish of Pear Doyenné du Comice and Brown Turkey Figs completed the display.

In class 2 there was but a single competitor for the collection of six dishes of dessert fruit. This was staged by Mr. W. Mitchell, gardener to J. Willis Fleming, Esq., Chilworth Manor, Romsey, Hants, and made a first rate display too. The Grapes were Mrs. Prince, in first-rate form, and Muscat of Alexandria. Peaches Sea Eagle and Orange Walburton Admirable, Pitmaston Duchess Pear, and Cox's Pippin Apple.

Class 3 was for a collection of Grapes, six distinct varieties, of three bunches each, both black and white. Again there was only one competitor, Mr. J. H. Goodacre, who made a fine display; but it would have been more effective had each variety been staged together, the only white variety being Muscat of Alexandria. Black Hamburgh, Barbarossa (immense clusters), Black Alicante, Gros Maroc, and Madresfield Court, small bunches of well coloured berries. A really fine exhibit.

The three bunches of Black Hamburgh only brought out six competitors, and nothing sensational in either bunches or berries. The first prize was secured by Mr. W. Mitchell for good bunches with small berries. Mr. J. H. Goodacre followed with better berries, but poorer in colour; while Mr. G. Lane, gardener to Miss A. S. Ridge, Highfield, Englefield Green, brought up the rear. Some of the exhibits in this class were not worthy of a City barrow stall, much less a class at this show.

Mrs. Pince was exhibited by three competitors, the first position being awarded to Mr. W. Mitchell, who had grand bunches of this variety, though rather "underdone," Mr. Jas Day, gardener to the Earl of Galloway, Galloway House, Garliestown, N.B., being second.

There were five contestants for Black Alicante, Mr. H. H. Brown, gardener to G. C. Raphael, Esq., Castle Hill, Englefield Green, being first with nice clusters, though rather deficient in bloom. Mr. M. Brodie, gardener to S. Platt, Esq., Wargrave Hill, Twyford, was a capital second, and Mr. W. Allan, gardener to Col. the Hon. C. Harbord, Gunton Park, Norwich, third.

The class for Madresfield Court was represented by four exhibitors, Mr. W. Mitchell scoring an easy first with three long bunches of excellent colour; while Mr. R. Milner, gardener to Miss Talbot, Margam Park, Port Talbot, made a good second, and the third exhibitor had neglected to place his card on the exhibit.

For three bunches of any other black Grape, no less than six exhibits were staged, the first prize being awarded to Mr. W. Mitchell for a grand exhibit of Gros Maroc. Mr. W. Harrison, gardener to Col. G. B. Archer Houlton, Hallingbury Place, Bishop's Stortford, came next with the same variety. Mr. W. Allan brought up the rear with a similar variety.



Nut, Duke of Edinburgh.

A finely flavoured Nut of medium-size; thick shell.

Muscat of Alexandria appeared to be more popular, there being no less than eleven contestants. However, Mr. J. H. Goodacre scored with three well coloured bunches, closely followed by Mr. Jas. Lock, gardener to the Hon. Mr. Justice Swinfen Eady, Weybridge, Surrey, with fine bunches; while Mr. W. Allan was third with smaller bunches of well coloured berries, though somewhat shrivelled.

There were but three exhibitors in the class for three bunches of any Frontignan varieties, Mr. W. Taylor, gardener to C. Bayer, Esq., Tewkesbury Lodge, Forest Hill, being placed first with three nice bunches of Chasselas Napoleon. Mr. Jas. Lock followed with good bunches of Mrs. Pearson, and Mr. Robert Grindrod, gardener to Captain Clive, Whitfield, Hereford, was third with Golden Queen.

DIVISION II.

The class open to nurserymen and market growers only is one that always excites the keenest interest. On this occasion, however, the produce was in keeping with the season; or, in other words, decidedly below par, at all events as far as size was concerned. Messrs. G. Bunyard and Co., Ltd., Maidstone, were awarded first place, and a first-rate display was made, too, the colour being excellent, though the size was decidedly below what one sees from the Maidstone firm. The best dishes of Apples were Worcester Pearmain, Twenty Ounce, Lane's Prince Albert, Grenadier, Reinette du Canada, Gascoigne's Scarlet Seedling, Cox's Pomona, Gold Medal, Washington, and Allington Pippin. The most noteworthy dishes of Pears were Pitmaston Duchess, Vicar of Winkfield, General Todtleben, Princess, and Durondeau. Plums were sparsely represented, but a good collection of Nuts was displayed, which must have been interesting to the visitors. Messrs. J. Peed and Son, Norwood, were second with a fine exhibit of Apples, arranged in baskets and plates. The fruits were below average size, but wonderfully bright and clean. The best baskets were Peasgood's Nonesuch, Lord Derby, Mrs. Barron, Wealthy, Allington Pippin, Warner's King, and Gascoigne's Scarlet Seedling.

Messrs. H. Cannell and Sons, Swanley, were awarded third for a highly coloured exhibit, which was also well arranged. The best Apples were Bismarck, Lord Derby, Cellini, Peasgood's Nonesuch, Grenadier, Jas. Grieve, Red Quarrenden, Emperor Alexander, and Gascoigne's Scarlet: a really fine exhibit, though the dishes were duplicated right and left, which was difficult to understand. Mr. J. Basham, Bassaleg, Newport, Mon., was an excellent fourth with an exhibit arranged in baskets, which, however, did not lend themselves to the object in view. Messrs. Spooner and Sons, Hounslow, were out in the cold, though why was not apparent.

In class 15, for 16ft run of tabling, Mr. J. B. Caldwell led; Mr. Geo. Mount was second, and Mrs. Pewbitt third.

For 32ft run of 6ft tabling (orchard-house fruit and trees), Messrs. Bunyard and Co., Ltd., were the only exhibitors, their collection being magnificent.

DIVISION III.

Fruits grown in the open air (except class 30). Gardeners and amateurs only.

The section started at class 17 for twenty-four dishes distinct, sixteen cooking and eight dessert, Mr. W. Wilkins, gardener

to Wm. Bythway, Esq., Narborough, Llanelly, being in the van with most excellent samples, admirably coloured, and they bore evident traces of careful culture. His dishes of Alexander, Newton Wonder, James Grieve, Allington, Tyler's Kernel, and Ribston Pippin were first rate. The second place fell to Mr. C. J. Salter, gardener to Mrs. Haywood, of Woodhatch Lodge, Reigate, with fine dishes of Egremont Russet, Lane's Prince Albert, Stone's, and Cox's. Third came to Mr. Wm. Lewis, gardener to R. H. B. Marsham, Esq., East Sutton Park, Maidstone, with a fine set, the Cox's being perfection.

For eighteen dishes, in twelve cooking and six dessert kinds, Mr. Chas. Crane, gardener to Mrs. Alexander, Chevering Huntton, Maidstone, was first with handsome dishes of Lane's, Peasgood's, Christmas Pearmain, Warner's King, and Newton Wonder. The second place was awarded to Mrs. Thos. Ridgewell, Ossett Grange, Essex, with rather uneven samples in the back row, but altogether they were good; and third out of six entries came to Mr. J. Cornford, Quex Park, Birchington, Thanet, and must have run No. 2 very closely.

First, second, and third, respectively in class 19, for the twelve dishes of Apples, were Mr. A. Porteous, of Belmont, East Barnett; J. W. Barks, Castle Hill, Bletchingley, Surrey; and J. G. Weston, Bessboro', Piltown, Ireland; these alone showing. The fruits were good all through, the Irish fruits being highly coloured.

Class 20, for six dishes of cooking Apples, brought out no less than ten entries, the lead being with Mr. J. Dawes, Ledbury Park, Ledbury, who had Pott's Seedling, Warner's King, Ecklinville, Peasgood's Nonesuch, Tyler's Kernel, and Bismarck, all large fruited. Mr. W. Wilkins, of Llanelly, was a good second with Alexander, Stone's, Mrs. Barron as good samples, there being no third prize.

The six dishes of dessert Apples (class 21) made a fairly bright display. Here again there were ten competitors, and Mr. W. Wilkins was a good first with even, unblemished, moderate-sized examples of Ribston, Allington, Gascoigne's, Cox's, Egremont, and others.

Mr. Wm. Lewis, Maidstone, was second, with Worcester Pearmain, Cox's, Wealthy, and Gascoigne's.

Dessert Pears, eighteen dishes. Here were some grand samples in three separate displays. The blue ribbon fell to Mr. G. Woodward, gardener to Roger Leigh, Esq., Barham Court, Maidstone, notwithstanding the terrible hailstorms, which so nearly ruined all he had early in the year. His samples were really magnificent, good dishes being shown in Conference, Fondante Thriot, Le Brun, Pitmaston, Louise Bonne, and M. Marillat. The Le Brun is a soft-yellow coloured Pear, very smooth and beautiful. Mr. W. H. Bacon, The Mote, Maidstone, came next with a beautiful display of M. Marillat, also Directeur Hardy, Beurré Bachelier, Louise d'Uccle, Beurré Alexandra, Lucas, and Beurré Baltet Père. The third was taken by Mr. J. Cornford, of Quex Park, Thanet, who had a well-selected assortment.

For nine dessert Pears, Mr. Hy. Parr, Trent Park, New Barnet, was the only exhibitor, with good Beurré Clairgeau, Thompson, Doyenné du Comice, and Doyenné Boussoch. For the six dishes, Mr. J. Moor, Banstead Wood, Surrey, was second to Mr. W. Mancey, Upper Gatton Park, Merstham, the latter showing clean, fine fruits of Doyenné du Comice, Marie Louise, Louise Bonne, Marie Louise d'Uccle, Durondeau, and Pitmaston Duchess.

The other classes (for Peaches and Plums) in this section will be briefly reported in our next.

DIVISION IV.

Special district county prizes, for amateurs and gardeners. Each class has a section for Apples, and another for Pears, distinguished by "A.A." for Apples, and "B.B." for Pears. In our report we

omit these, placing Pears after Apples. The prizes are valuable, amounting throughout to £1 for firsts, and 15s. for seconds, with third class single railway fare from exhibitor's nearest station to London. All the fruits are grown out of doors.

SURREY, SUSSEX, HANTS, DORSET, SOMERSET, DEVON AND CORNWALL.—For Apples W. Stowers was first with Bramley's Seedling, Cox's Orange, Bismarck, Peasgood's Nonesuch, Warner's King, and King of the Pippins. Mr. Coleman was a fair second.

The first prize for six dishes of dessert Pears was won by Mr. Coleman with good examples of Durondeau, Pitmaston Duchess, Duchesse d'Angoulême, Doyenné du Comice, and others.

WILTS, GLOUCESTER, OXFORD, BUCKS, BERKS, BEDS, HERTS, AND MIDDLESEX.—Six dishes of Apples—four cooking, two dessert. First, Mr. J. Elliott, gardener to J. F. G. Bannatyne, Esq., Haldon House, with Annie Elizabeth, Ecklinville, Peasgood's Nonesuch, Loddington, Ribston Pippin, and Worcester Pearmain; Mr. H. Aveny, gardener to R. P. Grace, Esq., was a moderate second. Mr. T. Turton was first for Pears, and Mr. G. Grigg second.

ESSEX, SUFFOLK, NORFOLK, CAMBRIDGE, HUNTS, AND RUTLAND.—Mr. J. Ellett, gardener to Sir A. K. B. Osborn, Bart., Chicksands Priory, Shefford, had the best six dishes of Apples, which included good samples of Golden Noble and Blenheim Orange; Mr. W. G. Davies, gardener to A. W. G. Wright, Esq., Newent, Gloucestershire, was second. For six dishes of Pears, Mr. W. H. Bannister, gardener to Mrs. St. Vincent Ames, Cote House, Westbury, was first with fair samples; second, Mr. A. Carlisle.

DIVISION V.

Single dishes of fruit grown in the open air. Open to gardeners and amateurs only. Two prizes are given in each class (except 52, 61, 64, 70, 71, 75, and 88), first, 7s.; second, 5s.

Choice Dessert Apples.

ALLINGTON PIPPIN.—First, Mr. R. Milner, gardener to Miss Talbot, Margam Park, Port Talbot; second, Mr. W. Stowers, gardener to G. H. Deau, Esq., Sittingbourne. Ten exhibits appeared in the class.

AMERICAN MOTHER.—Two entries. First, Mr. T. H. Slade, gardener to Right Hon. Lord Poltimore, Exeter;

second, Mr. C. J. Salter, gardener to Mrs. Haywood, Woodhatch, Reigate, with poor samples.

BLENHIM ORANGE (small, highly-coloured fruits, which will pass through a 3in. ring).—First, Mr. Geo. Grabbe, gardener to T. Lloyd Davies, Esq., Park House, Huddlestons; second, Mr. W. Stowers. Ten entries appeared in the class.

CHARLES ROSS.—Messrs. Horne, of Cliffe, Rochester, awarded three prizes for this new Apple—£5, £3, and £2 respectively. Mr. J. B. Colvill, Sidmouth, was the only exhibitor in this class, and deservedly took first prize.

COX'S ORANGE PIPPIN.—Mr. W. Stowers was first here with good fruits, and Mr. W. Lintott, gardener to Walpole Greenwell, Esq., Marden Park, second out of thirteen entries.

EGREMONT RUSSET.—Mr. Lintott first with a fine exhibit; second, Mr. D. McAinst, gardener to C. P. Wykeham, Esq., Leeds Castle, Maidstone. Five entries.

JAMES GRIEVE.—Three entries. First, Mr. J. Atkinson, Montrose Villa, Caversham; second, Mr. W. Harrison. The former were fine samples.

KING OF THE PIPPINS.—There were seventeen entries in this class, the first prize being won by Mr. McMurdie, and the second by Mr. W. H. Davies, gardener to A. W. G. Wright, Esq., Quarry House, Newent, Gloucestershire.

MANNINGTON'S PEARMAN.—First, Mr. John Lee, Kingscroft, Higher Bebington, Cheshire, with good samples; second, Mr. E. Coleman, gardener to T. L. Boyd, Esq., North Frith, Tonbridge.

MARGIL.—First, Mr. A. Carlisle, gardener to G. J. Gribble, Esq., Biggleswade; second, Mr. C. J. Salter.

PIPPIN.—Twelve entries. First, Mr. G. Grigg, gardener to the Right Hon. Earl of Ashburnham, Ashburnham Place; second, Mr. W. Stowers, with smaller but well-coloured samples.



Messrs. Veitch's Fruit Store at Langley. (See page 305.)

"ANY OTHER VARIETY."—In this class eight fruits were required to a dish for the judges to be able to taste two of them. There were twenty-four entries in this class, the first prize being won by Mr. W. Harrison with a good dish of Washington, Mr. W. H. Davies was second with a grand dish of Worcester Pearmain, Mr. A. Carlisle was third with the same variety, and Mr. W. Allen fourth with St. Edmund's Pippin.

Choice Cooking Apples.

BISMARCK.—First, Mr. W. Stowers; second, Mr. H. H. Williams, Pencalerick, Truro; six entries.

BLENHEIM ORANOE (large fruits).—Nine entries; first, Mr. A. Basile; second, Mr. W. F. Stowers, both good dishes.

BRAMLEY'S SEEDLING (Prizes by Messrs. H. Merrywell, Southwell).—Nine entries; Mr. Stowers was first with a grand dish, and Mr. R. Smith, gardener to Mrs. G. Pearson, Brickendonbury, Hertford; Mr. A. Basile, third.

GASCOYNE'S SCARLET SEEDLING.—Five entries; first, Mr. W. Stowers; second, Mr. Lintott.

GOLDEN NOBLE.—Mr. W. H. Davies was first in seven entries; second, Mr. Stowers.

LANE'S PRINCE ALBERT.—A fine class of thirteen entries. First, Mr. Stowers, with grand fruit; Mr. C. J. Salter second.

LORD DERBY.—Mr. Wallace, gardener to H. E. Smith, Esq., Roehampton, was a good first here, followed by Mr. Stowers.

MÈRE DE MENAGE.—First, Mr. Stowers, with big samples; second, Mr. C. Page, gardener to J. B. Fortescue, Esq., Dropmore, Maidenhead.

NEWTON WONDER (prizes by J. R. Pearson and Sons, Lowdham, and open only to exhibitors living in Cardigan, Radnor, Shropshire, Stafford, Warwick, Northampton, Bedford, Cambridge, Essex, or counties further north).—This was a good class. The first prize went to Mr. W. Allan, with fine examples. Mr. J. Day was second, and Mr. W. H. Divers, Belvoir Castle, third.

NEWTON WONDER.—Prizes by Pearson and Sons. Open only to exhibitors living south of the before-named counties. First, Mr. W. Stowers, with fine examples; second, Mr. W. Lintot; and third, Mr. W. Strugnell Rood Ashton.

PEASGOOD'S NONESUCH.—Four entries. First, Mr. Stowers with grand samples; second, Mr. Chas. Page.

STIRLING CASTLE.—Eight entries. First, Mr. Chas. Ross, gardener to Col. Archer Houblon, Welford Park, Newbury; second, Mr. T. Turton, gardener to J. K. D. Wingfield Digby, Esq., M.P., Sherborne Castle.

WARNER'S KING.—First, Mr. J. Lee; second, Mr. Stowers.

"ANY OTHER VARIETY."—This was a strong class, and the first prize went to Mr. C. J. Salter, for a fine dish of Stone's; second, Mr. J. Vert, gardener to Right Honourable and Rev. Lord Braybrooke, Saffron Walden, with the same variety; third, Mr. Coleman, with Royal George; and Mr. H. Aveny fourth, with the same variety.

Choice Dessert Pears.

BEURRE SUPERFIN.—Three exhibits. First, Mrs. W. Turton second, Mr. W. H. Bannister.

COMTE DE LAMY.—First, Mr. T. W. Herbert, gardener to J. T. Charlesworth, Red Hill. One exhibit.

DOYENNE DU COMICE.—A fine class. First, Mr. E. Gilmore, gardener to Lord Northbourne, Northbourne Abbey, Kent; second, Mr. J. W. Barks, gardener to H. Partridge, Esq., Bletchingley, Surrey.

DURONDEAU.—Three entries. First, Mr. T. Turton, with fine samples; second, Mr. W. Allan.

ÉMILE D'HEYST.—Three entries. First, Mr. W. Allan, with fine samples; second, Mr. D. McAinst.

LOUISE BONNE OF JERSEY.—Five entries. Mr. G. Grigg, first; second, Mr. W. Allan. Both good.

MARIE LOUISE.—Four entries. Mr. W. Allan, first; second, Mr. W. Mancey, gardener to A. Bensey, Esq., Upper Galton Park, Merstham.

PITMASTON DUCHESS.—A fine class of six entries; Mr. J. W. Barks was a good first; second, Mr. W. Allan.

THOMPSON.—First, Mr. W. Allan, who was the only exhibitor.

"ANY OTHER VARIETY" (eight fruits).—Mr. Allan, first, with Striped Williams, Bon Chrétien; second, Mr. W. Harrison, with Doyenné Boussoch; third, Mr. J. W. Barks, with a good dish of Fondante Thirriott.

DIVISION VI.

Fruit, miscellaneous. The Gold Medal premier award in class 89 for home preserved or home-bottled British-grown fruits, open to all, was secured by the Lady Warwick College, from Studley. The exhibit occupied a space 8ft by 6ft, and the fruits were shown in clear glass jars, a very well staged display, and the preserves were varied and excellent. Messrs. T. E. Austin and Co., St. James' Works, Kingston-on-Thames, were here beaten, the fruits appearing not nearly so fresh and tempting as those bottled by the Hostel folks. Mrs. M. A. Bangor, of The Chalet, Southwick, was not placed.

Class 89, F.—This class was also open to all, and could include "foreign grown and preserved or bottled fruits." The only exhibitor here was Miss C. E. Martin, Willowbrook, Auburn, New York, who had beautiful Pears, green Tomatoes, &c.

Bottled fruits (class 90), eighteen bottles of exhibits, to include six different kinds at least. Mrs. C. P. Markham, Hasland Hall, Chesterfield, beat Mrs. E. Beckett, Aldenham, Elstree, there being three exhibits.

Bottled fruits, class 91, exhibits of a dozen bottles. Mr. J. Bushell, of Sandling, near Maidstone, led; and Miss Alice M. Smith, The Bungalow, Southwick, Brighton, second, only two exhibiting.

VEGETABLES.

In the prize schedule, the Society notifies exhibitors that "official labels for the correct naming of the various items will be supplied," and, further, "that correctness in naming will have great weight with the judges."

DIVISION VII.

Starting at class 92, the vegetable classes ran to the 161st, making a total of seventy classes, the final one being for "any vegetable not mentioned above," thus leaving an opening for originals.



One of Bunyard's Pot Plums.

Reference is made to the pot trees at Allington (Messrs. Bunyard and Co.'s nursery) on page 306.

In class 92, for a collection of vegetables occupying not more than 100 sq ft, and open only to the trade, the only exhibitors were Richard Smith and Co., of Worcester, to whom a silver-gilt Knightian Medal was awarded.

In 92a, for a collection occupying 50 sq ft, open to the trade only, the premier position was held by Messrs. R. Veitch and Son, of Exeter, who obtained a Silver-gilt Knightian Medal. Messrs. Bunyard and Co., Ltd., had a Silver Knightian Medal; and Messrs. Cheal and Sons had a Silver-gilt Banksian Medal.

In the class for amateurs' collections of vegetables, occupying a space of 17ft by 3ft, four competitors appeared. Mr. Beckett, Aldenham House, led the way, and showed in his usual grand style, exhibiting an interesting variety of well grown vegetables. The arrangement of the exhibit was also very good, though the number of sorts seemed to be taken into consideration quite as much as quality. Notable varieties of vegetables staged were Celery, Early Rose and Giant White; Leek, Dobbie's International; Parsnip, Dobbie's Selected; Onions, Ailsa Craig and White Spanish; Potatoes, Sion House Prolific, Edgecote Purple, Sir John Llewelyn, and Lord Tennyson; Carrots, Red Elephant and New Red Intermediate; Cabbage, Winningstadt; Turnips, Golden Ball and Model; Mushrooms; French Bean, Canadian Wonder; Scarlet Runner, Hackwood Success; with Lettuces and other salads.

The second prize was well won by Mr. J. Gibson, gardener to R. W. Hudson, Esq., Danesfield, Marlow, who staged an ex-

hibit almost equal to the former in point of merit. Quality characterised all the vegetables, which comprised, amongst others, Cabbages, Flower of Spring and Green Colewort; Savoy, Perfection and Sugar Loaf; Onions, Ailsa Craig and Cocoonut; Leek, Royal Favourite; Potatoes, Edward VII., Britannia, and Satisfaction; Tomatoes, Polegate and Best of All; with Peas, Autoerat, Early Giant, and Gladstone. The third prize was won by Mr. W. Fyfe, gardener to Lady Wantage, Lookinge Park, Wantage; and the fourth by Mr. G. Lock, gardener to B. H. Hill, Esq., New Coombes, Crediton, Bath.

Mr. J. Bowerman, gardener to Lord Bolton, Hackwood Park, Basingstoke, had the best collection of vegetables, occupying a space of 24 square feet. The collection was a very high-class one, and comprised a large number of vegetables, including fine examples of Celery, Giant White and Standard Bearer; Onions, Excelsior and Blood Red; Leek, International; Cauliflowers, Autumn Giant and Autumn Mammoth, Sir John Llewelyn, Major, and Up-to-Date; Runner Bean, Hackwood Success; Tomato, Polegate; and Beet, Crimson Globe. The second prize was won by Mr. A. Basile, gardener to the Rev. Thos. McMurdie, Woburn Park, Weybridge, who showed, amongst other things, good dishes of Windsor Castle Potatoes, Intermediate Carrots, and Prizetaker Leeks. Mr. S. Hines, gardener to D. P. Bouverie, Esq., Coleshill House, Highworth, was a fair third.

Potatoes were well shown in the several exhibits that competed for medals in the trade division. Mr. R. W. Green, Wisbech, Lines, was a good first with clean tubers of The Factor, Cigarette, Victor, Evergood, Early Puritan, Northern Star, Duke of Albany, General Roberts, Snowflake, Snowdrop, Ninetyfold, Green's Favourite, and Sir John Llewelyn. Mr. J. B. Colville, Sidmouth, was a good second, and staged fine dishes of Royal Sovereign, Best of All, The Factor, Ideal, Satisfaction, and Springfield. Messrs. R. Veitch and Son, Exeter, occupied the third position.

In the amateurs' section, Mr. B. Ashton, gardener to Lord Lathom, Ormskirk, won the first prize for twelve varieties of Potatoes, with clean samples of Menarch, The Sirdar, Discovery, Carltonian, Ideal, Evergood, Duke of York, Webb's New Guardian, General Buller, Snowball, Snowdrop, and Fylde Wonder. Mr. A. Ayling, of Newhaven, took second prize with a good collection of tubers, which, however, struck us as being slightly rough; and Mr. Silas Cole, gardener to Lord Spencer, Althorpe, was third.

Division VIII., open to amateurs only, together with our notices of miscellaneous exhibits in the sundries tent and elsewhere, will be furnished next week.

Societies.

National Chrysanthemum.

The first meeting of the Executive Committee of the above society for the present season was held at Carr's Restaurant, Strand, W.C., on the 21st inst., Mr. Thomas Bevan in the chair, there being a good attendance. General satisfaction was expressed at the resumption of the business meetings of the society in a position so central.

The Secretary reported the death of Mr. James Smith, of Mentmore, one of the judges at the November exhibition, and a vote of condolence and sympathy with Mrs. Smith and her family was passed, the members having in grateful remembrance the kind assistance rendered by Mr. Smith on the occasion of the outing of the society at Mentmore a few years ago. Mr. George Woodward, The Gardens, Barham Court, was elected a judge of fruit, &c., in the place of Mr. Smith. Mr. F. Tapper having gone with the family he served at Sundridge Park, from thence to Brackley, resigned his seat on the Executive Committee with regret, and Mr. Geo. Caselton, superintendent of the Crystal Palace gardens and grounds, was elected in his place. Mr. C. H. Payne reported that the new catalogue was in the press, and would be issued at the earliest possible moment. A lengthy correspondence was read with the Crystal Palace Company in reference to the directors having arranged to hold a poultry show in connection with the November exhibition of the society, and thereby shutting out the society from the northern nave and central transept. The Secretary was instructed to send a strong protest from the Committee. The terms of an agreement with the Crystal Palace Co., duly signed and attested, was approved.

Mr. C. Harman Payne reported that the French National Chrysanthemum Society would this year hold its annual exhibition at Lille on the 6th of November. Any English friends would receive a cordial welcome. Also that a deputation from the French Society would attend the exhibition at the Crystal Palace on November 10; and it was resolved that they be entertained by the society. Mr. Payne also reported that the American Chrysanthemum Society held its first exhibition in 1902, and had issued an interesting report of its proceedings. The Chairman and Vice-Chairman also reported upon their visit to the recent Ghent Exhibition, to which they had been accredited as representatives from the society.

It was resolved that the annual dinner of the society should take place on November 25, subject to the ability of the President to preside on that occasion. The Secretary reported as to the annual outing of the society on July 13, at Park Place, Henley-on-Thames, attended by 193 persons, and said all the expenses had been met by the sale of tickets, leaving a balance to be carried to the general funds of the society. It was resolved by acclamation that this being the first meeting of the Committee after the outing, a letter of thanks be sent to Mr. Noble and Mr. Stanton. Fifteen new members were elected, and one society was admitted to affiliation. A vote of thanks was passed to the Chairman for presiding.

Bristol Gardeners'.

The closing meeting of the summer session was held at St. John's Parish Room on Thursday, Mr. E. Poole, F.R.H.S., presiding over a good attendance. The lecture was given by Mr. H. Kitley, his subject being "The Duties of a Gardener." He traced the life of a gardener from the time when he would enter an establishment as "garden boy" until he managed to reach the highest position in his profession. Amongst many good points made by the lecturer was the necessity for beginning at the bottom rung.

Gardening, he claimed, demanded and deserved the closest attention on the part of the student who would become master of the art. It demanded earnest toil, and it deserved his best powers. Poorly remunerated though the average gardener is, yet he has the assurance of belonging to a most useful calling. Mr. Kitley was heartily thanked for a lecture which, from beginning to end, maintained a very high level. Prizes offered for two bunches of Grapes were secured by Mr. J. B. Brain (gardener, Mr. Atwell); Mr. A. Cole (gardener, Mr. Bird), and Mr. W. F. Powell (gardener, Mr. Raikes). Certificates of merit were awarded Mr. A. Cole for three Cockscombs, Mr. Ambrose for a collection of Sweet Peas, and Dr. Eager (gardener, Mr. Cane), three *Odontoglossum crispum*. A certificate of special merit was recommended for a box of fine *Magnum Bonum* Plums, sent by Lady Cave (gardener, Mr. Poole).



Cordon Pear. Colmar d'Ete. Pyramid Pear on Quince. Emile d'Heyst.



ORCHID HYBRIDISATION.—Mr. Charles H. Hurst, F.L.S., at the British Association's recent meeting, treated on "Recent Experiments in the Hybridisation of Orchids." Speaking first of the recent progress in Orchid hybridisation, he said the first hybrid was raised in 1856, and there were 1,300 distinct crosses in 1903. The majority of hybrids were fertile. Orchid hybrids offered a wide field to the student of inheritance. Intermediate, dominant, and false hybrids were then dealt with in detail, and, as regards the last-named, further experiments into the nature of one-sided inheritance were, he said, urgently needed.

The notes on the Allington Nurseries (page 303) bear reference to the fine form and early fertility of the pyramid trees there, and the same applies to cordons. The woodcuts, from photographs of actual specimens, will substantiate what has been written.

Oxfordshire County Council.

Trial Allotments Competition.

The fifth annual exhibition of the produce grown on the Trial Allotments took place at St. John's College, Oxford, on Thursday, the 17th ult. Nine plots competed, viz., Bicester, Bodicote, Crowmarsh, Chipping Norton, Clifton Hampden, Dorchester, Goring, Witney, and Woodstock. There was a marked progress on previous years, both in the quality and keenness of the competition. The plot gaining the highest number of points at the show, plus the points awarded at the three visits made during the season to the allotments, carries off the cup and a gold medal.

This year Bodicote claimed premier position with 365 points, Witney (silver medal) following very closely with 363½ points, Crowmarsh (silver medal) 360½ points, Bicester 356½ points, Clifton Hampden 320½ points, Dorchester 297 points, Chipping Norton 287½ points, Goring 260¾, and Woodstock 226 points. Each plot exhibited as per schedule.

The Potatoes shown were above the average in quality; thirty-one out of thirty-six dishes staged gaining five to seven points each out of a maximum of seven. The twelve dishes of Peas staged were excellent for the season. Broad Beans, Brussels Sprouts, Cauliflower, Onions, and Leeks were exceptionally good. Mr. P. Elford, M.A., County Education Secretary, entertained the stewards, judges, and others to lunch in the College Hall.

SCHEDULE OF THE VEGETABLES EXHIBITED BY EACH TRIAL ALLOTMENT ON THURSDAY, SEPTEMBER 17, 1903, IN ST. JOHN'S COLLEGE, OXFORD.

Class.	Subject.	Number for a dish.	Variety.
1	Potatoes	6	a. The Sutton Flourball. b. Duke of York. c. Ninety-fold. d. Windsor Castle.
2	Peas	20	a. Early Giant. b. Perpetual.
3	Climbing French Beans	20	Tender and True.
4	Broad Beans	12	a. Mammoth Longpod. b. Prolific Longpod.
5	Runner Beans	20	Best of All.
6	Beet	2	Pine-apple.
7	Brussels Sprouts	20	a. Exhibition. b. Dwarf Gem.
8	Cauliflower	2	a. Purity. b. Autumn Mammoth.
9	Cabbage	2	Sutton's Earliest.
10	Savoy	2	a. Perfection. b. Best of All.
11	Cos Lettuce	3	Superb White.
12	Cabbage do.	3	Satisfaction.
13	Celery	2	a. A1. b. Solid White. c. Gibbs' Pink.
14	Carrots	6	a. Favourite. b. Scarlet Intermediate.
15	Leeks	6	Royal Favourite.
16	Onions	9	a. A1. b. Bedfordshire Champion. c. Nunham Pk. d. Cranston's Excelsior
17	Parsnips	6	Tender and True.
18	Turnips	6	Red Globe.
19	Jerusalem Artichokes	10	Sutton's White.
20	Vegetable Marrows	2	a. Bush White. b. Long Cream.

N.B.—Parsley is allowed for garnishing.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1903. September.										
Sunday ...20	E.S.E.	deg. 61·5	deg. 57·3	deg. 68·8	deg. 58·2	Ins. —	deg. 57·9	deg. 57·2	deg. 57·3	deg. 54·9
Monday ...21	E.S.E.	63·4	57·0	66·6	56·5	—	58·1	57·7	57·3	50·2
Tuesday ...22	S.E.	59·4	56·8	63·2	57·0	0·06	58·5	58·0	57·3	54·0
Wed'sday 23	S.E.	58·9	53·8	68·8	50·9	—	58·2	53·0	57·3	44·0
Thursday 24	S.E.	58·7	58·0	66·7	56·2	0·06	59·5	58·3	57·3	56·2
Friday ...25	S.W.	61·7	60·3	67·6	55·3	—	59·8	58·6	57·3	48·6
Saturday 26	S.S.W.	54·7	54·3	67·6	52·2	0·15	59·5	59·0	57·5	47·2
MEANS ...		59·8	56·8	67·0	55·2	Total. 0·27	53·8	58·1	57·3	50·7

Misty mornings, and dull but fine days.



Hardy Fruit Garden.

FILBERTS AND COB NUTS.—The nuts should be gathered during a dry period while they still remain in the husks, if they are to be preserved until Christmas or later. After gathering them, lay on a board in a dry place, shading from the sun, but admitting plenty of air. The object is to dry all the moisture out of the husks, as if this is not done mouldiness will set in. Drying in the sun extracts the moisture too quickly, and causes the husks to become brittle. The nuts may be stored in jars in a dry, cool, frost-proof structure, or laid thinly in a dry loft, covering them with straw.

STRAWBERRIES.—The present is a suitable time to establish a plantation of Strawberries. Such plantations, however, ought not to be expected to give a full crop the following season, especially if the plants inserted now are small or not well rooted. Good plants with well developed crowns, and a mass of fibrous roots adhering to a ball of soil, can be lifted and planted almost without their receiving the slightest check, so long as they are dealt with when the ground is moist. The position for planting should have received previous preparation, the digging and trenching being liberal and deeply carried out, a free use being made of rotted manure for enriching the ground. Prior to planting, firm the ground by well treading. As a general rule arrange the rows 2ft apart. Some of the strongest growers may require a wider distance of 3in to 6in beyond this, giving them also more space in the row. Ordinary growers may be 15in, while the strongest need not be more than 18in asunder in the rows.

In planting varieties without balls of soil attached to the roots, some care must be expended in spreading out the fibres in the soil. The best way is to form little mounds, and spread them out round this, having some fine soil handy to sprinkle over and make firm. Should the weather be dry give a watering immediately.

Beds of old plants from which the young rooted runners have been obtained will require after this, the removal of all the superfluous growth. Cut off the runner wires close to the old plants, at the same time clearing off any dead foliage. The runners which have rooted into the soil between the rows, and are not otherwise required, should be hoed up along with weeds, unless the latter are deep rooted, or of a perennial character, when it is best to fork these out, though involving, as it does, a little more trouble. Follow with a light mulching of short manure and soil.

ROOT-PRUNING FRUIT TREES.—Any fruit trees which have made more than usually luxuriant growth should receive a wholesome check, which root-pruning will give. Trees or bushes that have made 3ft or more of current year's wood have strong roots descending deeply into the subsoil, and these must be judiciously shortened. Where the root-pruning must necessarily be severe it will be best to only treat one half of the tree in one season, leaving the other half for the following year. The operation of root-pruning consists in first taking out a trench 3ft from the stem, going down a fair depth. Any strong roots met with may be cleanly severed on the side of the trench nearest the tree, but preserve all the fibres. The strongest roots will be found probably descending straight down. If so, cut them transversely across, paring the ends smoothly and cover with a coat of tar. Having done this satisfactorily, fill in the soil again, using a little fresh, loamy material mixed with bonemeal and wood ashes. Make the soil firm as the work proceeds, and lay out the fibres, raising them also to a more horizontal position than they previously were. A good watering will prove beneficial if the weather is dry and the soil is rather crumbly in character.

PEACHES AND NECTARINES.—The crop has been gathered from the majority of the trees, therefore give special attention to relieving them also of superfluous shoots. Those which have borne the fruits are no longer required, and weakly, as well as crowded shoots may be dispensed with. Keep the roots active near the surface by maintaining the soil fairly moist. Very often the trees are suffering from lack of moisture, which produces many ills, and throws trees into a debilitated state, rendering them an easy prey to insect attacks. Young trees growing strongly should be lifted and slightly root-pruned, re-planting quickly. A little bonemeal and wood ashes may be used with the fresh compost employed for renovating the roots of old trees. Freely syringe old trees, or young ones either, if the foliage has been attacked with red spider.

GATHERING FRUIT.—Continue to gather all the varieties of Apples and Pears which are in a proper condition for so doing. Unfortunately, many fine fruits have been damaged by the wind

in the recent gale, hence those which are bruised should be stored by themselves. Also the large quantities of fruit, which have been blown down and now stored, must be frequently examined for decaying specimens, promptly removing these.—EAST KENT.

Fruit Forcing.

VINES: EARLY FORCED HOUSE.—Vines that are to furnish ripe Grapes with certainty next April should be started by the middle of November. It is not an advisable procedure to start Vines permanently planted at so early a season. Very early forcing places a great strain on them through their having to make growth when the natural conditions are at the worst for elaboration and assimilation, and to rest at the hottest part of the year, there being great danger of the foliage collapsing from attacks of red spider, or ripening too early from climatic conditions. This may cause the buds that are to furnish the next year's crop to start into growth at the time the Vines should be resting. It can only be avoided by retaining some lateral growths as an outlet for any sap which the roots absorb, and it will not do any harm, but good, by securing a considerable amount of stored matter, always provided the lateral growths are not allowed to interfere with the free access of light and air to the principal leaves. These laterals should be removed gradually and continuously from late August until early in September, so as to admit of the Vines intended for starting early in November or December being pruned by, or soon after, the middle of September; and they will not bleed, nor will the buds start into growth if the house be kept cool and dry. There is no need to wait until the leaves are all down, as the resting having set in, there will not be any upward flow of sap; but bear in mind this must have been secured by the gradual reduction of the laterals and the resting apparent, otherwise the pruning buds may start. If not already pruned, lose no time in performing it; also the Vines to be started in December, not deferring pruning beyond the time the foliage commences to fall, so as to give the Vines a few weeks' rest.

Outside borders are a great mistake in early forcing Vines, especially Muscats, and whether heated below by hot water pipes, or above by fermenting materials, not nearly equal to due internal borders, ample, for the roots. Still, there are such borders, and have to be made the most of, or the Vines in them. The old practice of shielding them from the heavy autumnal rains by spare lights has not been improved upon, as it lets the border have the benefit of the sun that may appear, and that without depriving the soil of air. Thus, later on, the border can be covered with a good thickness of dry leaves or Fern, with some litter on top, so placed as to throw off some of the wet, and the heat thus covered up remains most of the winter. Where there may be plenty of leaves and stable litter, the well-tried practice of keeping out cold and getting some warmth into the border by placing them on top, renewing them from time to time, answers as well as ever. But we do not advise such procedure where better conditions obtain, yet adaptation to circumstances is a fine thing, and marks the cultivator as successful or otherwise. The very old practice of using fermenting material inside early forced vineries has not been bettered, as ridges of sweet fermenting material always give off heat, moisture, and nutrition, favouring good breaking and development of the growths, besides saving fuel. In the heap fashion ridges, like outdoor and indoor, for a very successful Grape grower uses the stuff for growing Mushrooms, and then spreads the beds over the border as a mulch for the Vines. Three parts of leaves, Oak or Beech, and one of stable litter, thrown into a heap a week or ten days before being placed in the house, get warm, then placed in ridges on the border allowed to become hot, then turned a time or two, give out all the heat that starts the Vines, and the beds are spawned, earthed, and anon lots of Mushrooms appear; so there is a sweet air for the Vines after they start, and the roots come into the sweetened material.

The whole thing means abundance of nitrogen, for the old spawn decays along with the manure, prime stuff speedily passing into ammonia, and with occasional sprinklings of air-slaked lime soon gets into nitrate, and better, into the Vines. This may be a wrinkle for someone hard set to make ends meet. Anyway, we advise the ridges of fermenting material in early forced vineries, always using that rare article, discriminative judgment, where there are plants, sweetening the manure properly, as the foliage may be seriously injured by the vapour given off. Therefore mix well together when thrown into the heap, damping the materials if dry, turning when getting warm, again damping if necessary, and when well warmed through they are fit for placing in the house.

YOUNG VINES.—The laterals must now be gradually cut back, letting the sun have a clear effect on the principal growths, not removing them all at once, but by degrees, getting them near the main rod with little further delay, so as to leave nothing but the chief cane or canes, and thus the principal leaves will plump the buds. Those having a tendency to con-

tinue growing to a late period may be checked by stopping the shoots moderately, facilitating the ripening by a high and dry temperature by day, turning off the heat, and keeping the ventilators, except during frost, open at night. Afford water only at the roots to prevent the foliage becoming limp. This will harden the wood and tend to induce maturity of the growths.

—ST. ALBANS.

THE BEE-KEEPER.

Locality and Position of Hives.

The influence of locality has a great deal to do with the results obtained in bee-keeping, and its importance is only brought home to us when the harvests obtained in different districts are reflected upon. Again, how many apiarists are there who consider whether a stock will give better results facing a different point of the compass?

With regard to the position of hives, ample experience confirms the idea that on a slope with a dry ground, facing south, is the best, and if such a situation is also enclosed by hedges or walls about 5ft high, on as many sides as possible, and the hives face where the southern sunbeams warm, and the N.E. winds cannot touch, the bees will obtain sunshine before, and shade after noon, which, together with a still, warm air, represent the apiarist's ideal.

In an enclosure of this kind the difference between any southern aspect, S., S.W., or S.E., is of little consequence, as the cold winds do not come from the south. The argument that the air in spring in an enclosed situation, being warmer, entices the bees to fly, and, on rising to a higher level, they are chilled and lost, is not altogether borne out by facts, one of which the detractors appear to overlook being that careful thermometrical observations show that no appreciable difference between the internal and external temperature is perceptible, while only an imperfect statement of the advantages of a calm air and protection from northerly and easterly winds has ever been made. For some phases of apiculture it possesses unrivalled benefits.

As is well known, one bee in spring is worth as much as a dozen in the autumn, as the increase in population depends upon the proper temperature of the brood nest being maintained in the early part of the year, and rapid increase is only possible in strong colonies. There is, however, another factor connected with rapid increase. If the hive is warm and snug, the temperature is maintained by fewer bees, the cold winds are avoided, and more bees are liberated for foraging. It has no doubt been noticed that in an unsheltered spot, when the evenings are chilly, numbers of the bees may be found on the ground around the hives, some of which bees are loaded with pollen. By fixing hives as described these bees may be saved. The explanation of their falling to the ground and remaining there is that on approaching the hive they, in order to alight, change the plane of oscillation of their wings, and in this position a puff of wind is sufficient to blow them to the earth, where the cold causes contraction of the blood vessels, slower respiration and diminution of vital energy. The pulsations cease entirely at freezing point, so that, if not resuscitated within a short time, they perish.

The frequent complaints of the great mortality amongst bees in spring may be traced to some such simple cause as lack of sunshine, or the position of the hive allowing the cold winds charged with driving sleet to penetrate to the interior, or that the locality is unfavourable. Sunshine is very important in spring for many reasons, and hives should not therefore on any account be set in permanent shade. Nothing is more beneficial than the sun's rays, which gently raise the temperature, thus enabling the bees to change their cluster and rearrange their stores.

In such matters as these a little thought in the right direction, and the application of the requisite management, would render the pathetic accounts of losses less frequent. With the idea of being humane some even move their hives to a warmer spot to protect them from the elements during winter, and then leave them, overlooking the fact that if a sudden spell of warmth should come, and the bees become active, they return to the old spot, and many are lost.—E. E., Sandbach.

Trade Catalogues Received.

Peter Henderson and Co., 35 and 37, Cortland Street, New York.—*Autumn Catalogue.*

John K. King and Sons, Coggeshall.—*Bulbs, &c.*

L. Späth, Banmschulenweg, Berlin.—*Fruits, Trees, and Shrubs.*



* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.

POTATOES TO NAME (J. G.).—The varieties, so far as it is possible to tell from single tubers, are No. 1, Up-to-Date; No. 2, White Elephant.

CARNATIONS WITH FLOWERING SHOOTS (A. B.).—It is hardly likely that plants with no "grass" now will form any this season sufficiently strong to flower another season, but the roots will possibly survive the winter and make plenty of growth next season, and flower well the following year. The cuttings should not be torn off the stem, but cut so as to have one joint clear of the crown leaves, and being cut transversely below the lowest joint they should have the leaves from it removed. Insert the cuttings in sandy soil under a handlight, and keep them shaded until rooted.

VINE LEAF SPOTTED (T. T.).—The spots on the leaf are caused by the Vine leaf spot fungus (*Cercospora viticola*). It forms irregular, dry, brown spots on Vine leaves, and is most abundant during a damp season. The discolouration extends through the leaf more or less, and is most abundant on the lower shaded leaves. The disease is mainly due to keeping the house too close and moist; indeed, the parasite cannot spread, if indeed live, in a well-ventilated atmosphere, and with the foliage fully exposed to light. We are not aware that any repressive measures have been taken against this pest, and in our experience it does not occur or reappear when the temperature and atmospheric conditions are buoyant, a gentle warmth being maintained in the hot water pipes, so as to admit of a circulation of air in dull, cold, damp weather. The season has no doubt been favourable to the fungus, the wet circumstances and the relatively closer and moister atmosphere being responsible for its progress. After pruning the Vines may be dressed with a solution of iron sulphate, 1lb to a gallon of water, applying with a brush after removing the loose bark, but being careful not to injure the live bark. Another season ventilate more freely, and have the growths sufficiently far apart to allow the leaves full exposure to light.

MANURE FROM HORSES THAT ARE BEDDED DOWN WITH SAWDUST (Constant Reader).—We have used manure from loose boxes in which hunting horses were kept and bedded down with sawdust, and not found any injurious effects to crops in either flower or kitchen gardens, or even on grass or arable land. The only objection to its use we found is the liability to engender fungi, the mycelium of some of which spread from the sawdust into the soil, and affected the crowns of plants prejudicially, the mould either directly acting on the rootstocks or abstracting the nitrogen in the soil, and thus causing a weakly growth in the crop plant. This has chiefly occurred when the sawdust manure has been used in a raw state and as a mulch or top-dressing. We have also used the sawdust manure for growing Mushrooms. For ordinary purposes the manure was simply prepared by throwing into a heap and soaking thoroughly with liquid from the stable draining tanks, and as soon as heating, and before becoming so hot as to burn in the interior of the heap, turning, and again wetting if necessary, repeating this a few times until the rankness had passed off, and the violent heating been subdued; then the heap was allowed to rot in the usual way of manure heaps generally, and used in the ordinary course of manuring after three to six months' lying. This was on a gravelly soil of the oolitic formation. In the case of soil of a damp and vegetable nature, and perhaps in all cases of peat moss or sawdust being used for bedding, it is advisable to mix with the manure one-tenth of quicklime, slaked with water previous to use, mixing well with the manure after the violent heating has passed off and the heap thoroughly moistened throughout, and then allow to rot for a few months. Some prefer to slake the lime with a salt brine, using about one bushel of salt to six bushels of lime, the lime being slaked to a dry powder. The freshly slaked lime is spread in layers upon the manure, thoroughly moistened, in the proportion of about two bushels of lime to a hundred of manure, the layers of manure being about 6in thick, building up from

4ft to 5ft high, and of any convenient width and length. The manure, if thus treated late in autumn, will be ready for use in the following spring, and during that time it should be turned, outside to inside and top to bottom, two or three times.

CHRYSANTHEMUM PLANT WITH LEAVES BROWNE (X. Y. Z.).—The plant is quite sound in the root-stem and stem above ground, but the leaves are all dead, blackened, and hanging down, and lying close to the stem. It is affected by the Chrysanthemum leaf blight (*Cylindrosporium Chrysanthemi*), a parasitic fungus that causes dark, large blotches to appear on the leaves, which turn yellow, then shrivel up, brown or black, and the diseased leaves hang down and lie close to the stem. When attacked the flower buds do not expand, or very indifferently. No doubt the wet weather had a considerable effect on the foliage, but the fungus is the real cause of the collapse of the leaves, and for it no treatment has had any apparent effect. Doubtless the best course is to burn the affected leaves or destroy the plant as soon as the disease is observed.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (A. O.).—1, *Hemerocallis japonica*; 2, *Saxifraga sarmentosa*. (F. W.).—*Liliodendron tulipifera* (Hendon).—1, *Genista aetnensis*; 2, *Spiraea Thunbergii*. (H. N. R.).—1, *Lychnis Chalcedonica*; 2, *Clematis flammula*; 3, *Rhus typhina*. (Filix).—1, *Aspidium molle*; 2, *Athyrium Filix-femina*.

NAMES OF FRUITS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (Surrey).—1, Stirling Castle; 2, Allington Pippin; 3, Egremont Russet. (P. W.).—Duchess of Oldenburg.

Covent Garden Market.—September 30th.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, cooking, bush.	5 0	to 8 0	Lemons, Messina, case	10 0	to 15 0
" dessert, ½-bush.	5 0	9 0	Oranges, ease	10 0	15 0
Bananas	10 0	15 0	Pears, per ease, 48's	8 0	10 0
Grapes, Alieante, lb.	1 0	1 3	" small, ½-sieve	6 0	7 0
" Colman	0 9	1 3	Pines, St. Michael's	3 0	5 0
" Hamburg	1 0	1 6	Plums, Switzens	5 0	6 0

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 0	to 0 0	Horseradish, bunch	1 3	to 1 6
" Jerusalem, sieve	1 6	0 0	Leeks, bunch	0 2	0 2½
Batavia, doz.	2 0	0 0	Lettuce, Cabbage, doz.	0 6	0 0
Beet, red, doz.	0 6	0 0	Mushrooms, forced, lb.	0 8	0 9
Brussels Sprouts, ½-sieve	2 0	2 6	Mustard & Cress, doz.	1 6	0 0
Cabbages, Spring, tally	2 0	0 0	punnets	1 6	0 0
Carrots, bunch	0 2	0 0	Onions, bushel	3 0	0 0
Cauliflowers, doz.	1 0	0 0	Parsley, doz. bnchs.	2 0	0 0
Celery, per bun. of 8	0 9	1 0	Potatoes, cwt.	4 0	5 0
Corn Salad, strike	1 0	1 3	Radishes, doz.	0 9	1 0
Cos Lettuce, doz.	1 0	0 0	Scarlet Runners, bush.	1 0	1 6
Cucumbers doz.	2 0	0 0	Spinach, bush.	2 0	0 0
Endive, doz.	1 6	0 0	Tomatoes, English, lb.	0 3	0 0
Herbs, bunch	0 2	0 0	Turnips, bnch.	0 0	0 2

Average Wholesale Prices.—Plants in Pots

Most of the undermentioned plants are sold in 48 and 32-sized pots

	s. d.	s. d.		s. d.	s. d.
Aralias, doz.	5 0	to 12 0	Foliage plants, var, each	1 0	to 5 0
Araucaria, doz.	12 0	30 0	Grevilleas, 48's, doz.	5 0	0 0
Aspidistra, doz.	18 0	36 0	Hydrangeas, pink	12 0	0 0
Chrysanthemums, lifted	4 0	5 0	Lycopodiums, doz.	3 0	0 0
" disbudded specimens	1 0	2 6	Marguerite Daisy, doz.	6 0	0 0
Crotons, doz.	18 0	30 0	Myrtles, doz.	6 0	9 6
Cyperus alternifolius	4 0	5 0	Palms, in var., doz.	15 0	30 0
Dracæna, var., doz.	12 0	30 0	" specimens	21 0	63 0
" viridis, doz.	9 0	18 0	Pandanus Veitchi, 48's,	24 0	30 0
Ferns, var., doz.	4 0	18 0	doz.	4 0	6 0
" small, 100	10 0	16 0	Shrubs, in pots	5 0	6 0
Ficus elastica, doz.	9 0	12 0	Solanums	5 0	6 0

Average Wholesale Prices.—Cut Flowers

	s. d.	s. d.		s. d.	s. d.
Arums, doz.	4 0	to 5 0	Marguerites, white,	1 0	to 2 0
Asparagus, Fern, bnch.	1 0	2 0	doz. bnchs.	1 0	0 0
Carnations, 12 blooms	1 0	1 6	" yellow, doz. bnchs.	0 6	0 0
Cattleyas, doz.	10 0	12 0	Myrtle, English, bunch	4 0	0 0
Croton foliage, bun.	0 9	1 0	Odontoglossums	2 0	0 0
Cycas leaves, each	0 9	1 6	Orange blossom, bunch	1 0	1 6
Eucharis, doz.	1 6	0 0	doz.	1 0	2 0
Gardenias, doz.	1 6	2 0	" pink, doz.	1 6	2 0
Geranium, scarlet, doz.	3 0	4 0	" yellow, doz. (Perles)	2 0	0 0
bnchs.	1 6	0 0	" Liberty, doz.	1 0	1 6
Ivy leaves, doz. bun.	3 0	3 6	" Generals	2 6	3 0
Lilium Harrisii	4 0	0 6	Smilax, bunch	3 0	4 0
Maidenhair Fern, doz.	9 0	15 0	Stephanotis, doz.	3 0	0 0
bnchs.	9 0	15 0	Tuberoses, gross	3 0	0 0



The Brussels Dairy Congress.

A most notable collection of scientific dairying experts attended this international meeting, the latest of a series which have been held on the continent of Europe in various places. There were present 500 delegates from every part of the world, all the principal governments except our own being officially represented. Considering the important position which the dairy occupies in our national economy, our rapidly increasing urban population, and the increasing demand for dairy products, it is not very creditable to our authorities that they should neglect such an admirable opportunity of acquiring valuable information on a matter of national importance. There were certainly three or four Englishmen present, one being a well-known professor, but in no official capacity.

As one of the objects of these meetings is to form an international federation, it is most desirable that we should not be left out in the cold, but that, as the best customers for dairy produce, we should, at any rate, have some voice in the regulation of their production. It is not only as an agricultural, but as a generally economic question that it is so important, for the quality of the imports of dairy produce is of vital interest to our teeming population. To encourage the production of pure butter, and to see that margarine mixtures are not palmed off to the consumer in its stead, are surely worthy enough objects to our agricultural authorities.

It was in connection with the possible, or rather probable, adulteration of butter with margarine, that a most important and a very sharp discussion arose. A proposition was made that it was, and is, desirable that some substance should be mixed with margarine, so that if the latter should be used in the adulteration of butter its presence could be detected by chemists. Starch or sesame oil mixed with margarine can be readily detected, although they do not affect the sale of margarine as such. The carrying of the above proposition was much resented by the Dutch delegates, who left the Congress in a body. It appears that there is a system of private control in Holland which supervises the export of butter, and that butter sent into Belgium from Holland direct from the centre of control was found satisfactorily pure, but that butter which had been detained or recondemned had been adulterated with margarine. The Dutch Government propose to inaugurate a system of national control; but the simplest course would be to agree to the addition to margarine of a revealing substance, so that its presence in Dutch or any other butter can be easily ascertained. We can only hope that the recommendations of the Congress on this matter may bear fruit, and that the use of margarine for butter adulteration may be made impossible.

A visit was paid by the Congress to an institution which could with advantage be imitated in this country. It was a school at Louvain, managed, or rather under the supervision of religious sisters. The students are peasant girls who are taught science, three languages, cooking, laundry work, dress-making, dairying, poultry-keeping, and gardening, at a cost to the parents of £10 per annum, the balance of cost, we presume, being borne by the State. There are 1200 girls in residence, and everything is conducted on the most modern and up-to-date principles. Why should education of this kind be left to the private enterprise of such pioneers as Lady Warwick, who cannot, with limited funds at their command, provide education at such an easy rate as this? No doubt the county councils may do something in this direction if they are willing and the Education Department will let them, but we fear that the way they are cutting down expenses of the voluntary schools does not promise much liberality in the direction of secondary technical education.

The Children's Employment Bill.

We have just been writing of Continental encouragement to true rural education. Here is a contrast. Under the provisions of the Education Acts, children will shortly have to remain at school until they are fifteen years of age, to assimilate knowledge which, to a large majority of them, will be of no practical use, while, as if keeping them so long at school was not sufficient

safeguard against their being taught to become useful citizens, here we have a Bill to effectually fill all the loopholes left open by the education authorities. We are confident that the rural elector who has got fully roused on the education question will show a very considerable interest in this side of it at the approaching general election. The Bill is evidently framed to deal with the evils which no doubt exist in connection with child employment in large towns, but it unfortunately also applies to rural districts where those evils seldom or rarely exist. The councils of cities and large towns are given power to make bye-laws under the Act, but rural councils are not given this power, and the Act will be administered under certain very drastic statutory provisions, which will almost entirely prevent the employment of children on the land. Girls who remain at school until they are fifteen go at once into domestic service, and it is the same with boys, except that keeping them at school so long, and allowing them no light breaking-in, they are disinclined for anything of a laborious nature, but nearly all aim at clerkships, being apprenticed to tradesmen or shop-keepers.

We are glad to see that so prominent a man as Mr. Jesse Collings sees the wrong which such a bill may bring about. A few words of his published by "Farm and Home" are worth repeating. "The whole Bill bristles with new made crimes, crimes for the most part not the result of dishonesty, misconduct, or moral wrong-doing, but connected with work. Labour is discredited and associated in the minds of the young with crime and with the policeman who has to enforce the law."

These are forcible words, but none too strong. There is a very wrong impression abroad that child labour means hardship. There is no such thing connected with it in rural districts. On the contrary, at certain times of the year occupation may be found for children on the land, which not only provides useful additions to the family exchequer and is beneficial to the community, but is a source of interest and enjoyment to the children themselves. We may add that by children the Act means all under sixteen years of age.

Work on the Home Farm.

Except a field here and there, and a few rakings, the harvest is safe in stack, and thatchers are having a busy time. It is interesting to observe the difference in the manner of thatching on farms contiguous to each other. The thatching is all let by the square yard of thatch put on, the price varying from 1d. to 2d. per yard. On one farm, occupied by a farmer of the old-fashioned type, one who has weathered the storms which have swamped many a neighbour, and, although careful in his expenditure, yet scorning to do things in a slipshod way, the stacks are being covered as if the thatch were required to stand for three or four years, and the Thatcher who receives 2d. per yard earns little more than ordinary daily wages, though he may obtain much satisfaction from the knowledge that he has done especially good work. On the other side of a narrow lane is another stack yard. Here things are very different. One penny per yard seems good pay for the work which is being done, and it is the evident intention of the young and—may we say?—progressive occupier to make the best use of a threshing machine; and when his stacks are once dry, to give them little chance of getting wet again. The very shape of the stacks suggest instability, and they are evidently not meant to stay. The new system may spell profit to the farmer, but means death to the labourer and his employment.

A few fine days since harvest concluded have enabled us to cultivate and make a fair fallow of one piece of wheat stubble. The moist weather was encouraging the spread of a few clumps of couch, but they have been successfully dissipated into smoke, and that field will be no source of anxiety until spring comes again. Seeds ploughing has been somewhat hindered, but will now receive full attention.

Potatoes, which were dying off so fast, are now holding their own, and will not be ripe so soon by a week as we had expected. There is a very sharp inquiry by purchasers for winter delivery. Some lots are being hurried off to meet a strong spot demand, and Potatoes are distinctly booming. The great demand is for Up-to-Date, which has not yet been knocked out by the army of grand new sorts. We hear of Northern Star being sold at £8 per cwt. There must be a big lot of Northern Star in the country. Will there be customers for them at £160 per ton?

All kinds of sheep are hardening in price, but breeding ewes are very dear. Useful gimmers are making 60s. each, which is something like 10s. over last year's price. Rams also are much dearer. Beef is not a good trade, but there is a good prospect for Xmas beef, and graziers who can winter feed will be foolish to hurry off their bullocks. Cakes are reasonable now, and will pay for use, whilst there will be abundance of winter food to resort to in November.

PLANTING SEASON



PAULS' ROYAL NURSERIES

WALTHAM CROSS, HERTS.

12 miles from London. South Entrance four minutes' walk from Waltham Cross Station; West Entrance three minutes' walk from Theobald's Grove; both Stations on the Great Eastern Railway.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Gold Medals in 1903 from Royal Horticultural and Royal Botanic Societies.

FRUIT TREES for the Orchard, Garden, and Forcing House. Hogg Memorial Medal, 1901.

HARDY TREES for Streets, Parks, and General Planting. Silver Medal from Royal Agricultural Society of England.

SHRUBS, both Evergreen and Deciduous.

CLIMBING PLANTS, Hardy and Greenhouse.

RHODODENDRONS, CAMELLIAS, & AZALEAS.

HERBACEOUS PLANTS in great variety.

BULBS and SEEDS, and all Garden Sundries.

PRICE LISTS ON APPLICATION. INSPECTION INVITED. Upwards of 1000 Medals, Prizes, and other Awards at leading Exhibitions during the past 42 years.

SOLE POSTAL ADDRESS—

WM. PAUL & SON,
WALTHAM CROSS, HERTS.

Rose Growers by Appointment to His Majesty the King.

PHILIP LE CORNU'S
JERSEY FRUIT TREES,
ROSE TREES,

And **CARNATIONS** are properly packed, free of cost, and promptly delivered, carriage paid.

CORDONS A SPECIALITY.

Before ordering every reader of this paper should write for my ILLUSTRATED CATALOGUE and PLANTER'S GUIDE.

PHILIP LE CORNU, F.R.H.S.,
THE JERSEY NURSERIES, JERSEY.

Price 2/6; Post Free 2/7½.

THE PINE APPLE MANUAL

By Contributors to the "Journal of Horticulture."

ILLUSTRATED WITH ENGRAVINGS.

Being a Guide to the Successful Cultivation of that Fruit, and to the Construction and Management of the Pinery.

Office: 12, MITRE COURT CHAMBERS, FLEET STREET, E. C.

CLIBRANS

DOUBLE PRIMULAS.

EXCELLENT for cutting or as Pot Plants. We offer the following choice varieties, strong healthy plants, in 3in. pots, at reduced prices.

	Each.	Per doz.
Alba Plena, pure white	9d.	8/-
Annie Hillier, light pink	2/-	20/-
Candidissima, the best white	1/-	10/-
Earl of Beaconsfield, rosy carmine	1/6	15/-
Marchioness of Exeter, white speckled pink	2/-	20/-
Stewartii, double red, fine	1/6	15/-

CINERARIAS

from stores, 1/6 doz.; in 3in. pots, 3/6 doz.

CYCLAMEN

in 5in. pots, set with buds, 12/- and 18/- doz.

PRIMULA SINENSIS

to colour, or mixed in 3in. pots, 2/6 doz.

All above prices are special to this Advt.

ALTRINCHAM & MANCHESTER

WILLIAM BARRON & SON

Landscape Gardeners and Nurserymen,
ELVASTON NURSERIES, BORROWASH, DERBY.

Invite intending planters to inspect their unrivalled **STOCK of ORNAMENTAL & FOREST TREES, RHODODENDRONS, ROSES, & FRUIT TREES.** Send for Catalogues and List of Public and Private Works carried out by them.

BULBS

EXTENSIVE COLLECTIONS OF

Hyacinths Snowdrops
Tulips Crocuses
Narciss Scillas
Liliums &c.

Best qualities at most moderate rates.

Delivered Free by Rail or Parcel Post.

DESCRIPTIVE CATALOGUE 574 POST FREE

DICKSONS BULB GROWERS, **CHESTER**

THE ROYAL PARKS AND GARDENS OF LONDON.—Their History and Mode of Embellishment. With numerous Engravings, and a series of Designs of Flower Beds and Borders, with examples of Planting them effectively according to the several styles known as Carpet, Geometrical, and Sub-tropical Bedding, besides Notes on the Propagation and Culture of the Plants employed. By NATHAN COLE. Price 2/6, post free.—JOURNAL OF HORTICULTURE Office, 12, Mitre Court Chambers, Fleet Street, E. C.

PURE WOOD CHARCOAL, Specially Prepared for Horticultural use. Extract from the *Journal of Horticulture*: "Charcoal is invaluable as a manurial agent; each little piece is a pantry full of the good things of this life. There is no cultivated plant which is not benefited by having Charcoal applied to the soil in which it is rooted." Apply for Pamphlet and prices to the Manufacturers—**HIRST, BROOKE & HIRST, Ltd., Leeds.**



Journal of Horticulture.

THURSDAY, OCTOBER 8, 1903.

The Planting Season.

ONE of the great delights which belongs to gardening is that there is no dull season, as each period of the year brings its work, its harvest, and plans for the future. When the first days of October come, the tinted and fast falling leaves proclaim in no uncertain manner that the sands of the year are running low, and that vegetation in the open air is approaching the resting period. But though Nature may be dropping into inactivity, it is no time for the gardener to do so, for undoubtedly it is during the autumn months that the foundation should be laid for the successes of another year, and in some cases for the triumphs or failures of many succeeding years. Yes, truly, some of the soundest work of the gardener is done in the time of autumn.

Plans will already have been laid, and as fast as opportunities occur, preparations will be made for planting operations of various descriptions which are to be carried out between November and March. Every man who plants a tree or shrub of any description should fully realise that he is doing work which may for generations stand as a monument either to his capacity or ineptitude.

When once the full force of this point is grasped the labour connected with planting becomes interesting, if not engrossing, and even under unfavourable circumstances ways and means are found for securing good results. Fortunately, private gardeners as a body seem to recognise the importance of thoroughness in all matters connected with planting, and it is rare indeed in any good garden to find such work being scamped, because the chief, when not actually taking part in the operations, keeps a very keen eye on the operators when extra hands have to be engaged, or distributes

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E. C., and to no other person and to no other address.

1500,000 BULBS.

Spanish Iris, Yellow, White, and Blue	7/6 per 1000.
Crocus, all colors	5/6 per 1000.
Sir Watkin Narcissus	5/6 per 100.
Horsefieldii	5/6 per 100.
Trumpet Narcissus	7/6 per 1000.
Glory of Leiden Narcissus	6d. each.
Madam de Graaff	3/6 each.
Sweet Scented Pheasant Eye	
Narcissus	5/6 & 7/6 per 1000.
Mixed Narcissus	5/6 per 1000.
Double Daffodils	5/6 & 10/6 per 1000.
Tulips, Mixed (choice)	2/6 per 100.
Single Lent Lilies	3/6 per 1000.
Snowdrops	5/6 & 7/6 per 1000.
Strawberry Plants	1/6 per 100.

SEND FOR LISTS BEFORE ORDERING ELSEWHERE.

Cross & Son, Wisbech.

such hands among his own trustworthy men. There is, however, a great deal of planting done throughout the country each year, under the superintendence of men who have never had any practical experience of such work, and as the staff who do the work have often had no real training, and are only interested in earning a labourer's pay, it is not surprising that the results are frequently disastrous to those who have to pay the piper. It cannot be too emphatically stated that anyone who has planting to do on a large or small scale will always find it wise economy to employ reliable men; in the former case an experienced planter who will see that the work is done as it should be, or have the whole matter carried through by a nursery firm of repute. When there is only a little to be done, get a trustworthy man, who knows how to plant and whom you can trust to do it well. After such a man has been found pay him well, and do not expect him to use both brains and hands for the pay of a labourer.

Thousands of pounds are wasted in Britain every year over planting operations, through the craze for cheapness. Trees and shrubs are picked up at the lowest possible cost, and stuck into the soil by under-paid men, who know very little, and care less, about the work in which they are engaged; and thus our fruit plantations, woods and shrubberies, are in many cases glaring examples of mismanagement. Those who have had the bitter experience of having in the past wasted money on unsatisfactory planting should see to it that this year a start is made in the right direction, and that the well-known methods of preparing the soil by trenching, or by making holes of sufficient size, and securing good drainage, are not neglected.

Turning to the subject of fruit growing, the thought naturally arises how far will the past—to many—disastrous season affect the planting of fruit trees? Well, my firm conviction is that there is only one condition which will prevent intending planters from carrying out their plans, viz., lack of funds. The season has been so bad that many growers who make a practice of extending their plantations each year will have to stay their hand till another season. Very few men who understand their business will drop making extensions because of a bad year, so long as they have funds at command, because they know that after a couple of lean years the time of plenty is near at hand, and there is still a fine opening for the grower of good samples of English Apples and Pears in our markets.

Although the season has been one of the worst on record for fruit growers generally, some have been fortunate, and are reaping a rich harvest. A few days ago I saw a grand Pear tree, on which the fruit literally hung like ropes of Onions, and the owner calculated he should get nine or ten pots of fruit, for which a customer had already been found at the splendid figure of 25s. per pot. The same tree, I was informed, had not failed to bear a crop annually for the last ten years. The variety was Thompson, a Pear of fine quality, which I can confidently recommend to intending planters.

In another case I found a fine set of standard Apple trees growing on high ground in an exposed position carrying splendid crops of extremely fine fruits. Nearly every tree was heavily cropped, and I jotted down sixteen varieties as being in that condition. This planting on high ground is a point which should be kept constantly in mind by planters. Do not be misled by results during one or two favourable seasons. We all know that the land in the valleys is generally better than that on the hills, and will give grand fruit (as a rule); but there are far too many years of failure through spring frosts, whereas on high ground the blossoming time is retarded, often just long enough to escape the dreaded frosts, and the wood produced in exposed positions, being shortjointed, always ripens, and blossoms well. Truly there is much to be said in favour of growing a fruit-tree—as well as an individual—sturdily.—H. D.

Notes from Frenchay, near Bristol.

In the neighbourhood of Bristol are necessarily many gardens more or less familiar, from the fact that a speciality of some kind made of plant, flower, fruit, or vegetable within them. It would, I think, be safe to say that, numerous as are the gardens surrounding this notable Western city, none surpass Malmains for the richness of its one distinguishing speciality—Filmy Ferns.

Probably nowhere in the kingdom is there to be found so large a collection of specimens at once so healthy, so large, or so happily accommodated. What makes them the more remarkable is that Captain Belfield, whose residence Malmains is,

collected and brought home the whole of these, and many other plants besides, from Australia and New Zealand many years ago. Spring rather than autumn is the better time to see *Todeas* in perfection; then the young fronds and the extremities of the older ones are clothed with the pale green verdure such as no other Fern can approach nor defy. The extremely moss-like fineness of the fronds when enclouded in mist display diamond-like pendants from beneath them. On a summer's evening a visit to this house bespangled with misty dewdrops gives an impression of coolness and sublimity scarcely known to greenhouse, and comparable only to the hoar frost scenes of winter.

The house itself is a most simple structure; were it otherwise, probably some of the noble grandeur of the plants would be lost, and, still more possible, the collection would long since have lost much of its fame and unique progress of character. The roof, almost flat, is supported by solid and deep outer walls, and is heavily shaded to shut out every vestige of a possible sunray. The aspect is an eastern one, and the use of fire heat seldom made.

Few probably realise the extent of cold these *Todeas* will endure; but Mr. Rye, the able gardener in charge, assures me that except in the most severe weather no warmth from the pipes is given until morning, and then only for an hour or so. Dewdrops have often been converted into icicles, the soil in the pots too hard for the finger to make an impress, and the surface of the fronds white rather than densely green—conditions that tend to paralyse with fear any save those who have grown accustomed to the scenes in winter time. Even those intimately concerned would voluntarily prefer to find the frost fiend absent, but it has been found that coolness, even if it touches the frost line, is better than the other extreme, fire heat not affording a desirable condition for these notable Filmy Ferns. They number some fifty or more; none of them, I believe, occupy less than 12in pots, while the larger specimens need a diameter of twice that amount. The largest raises its head 3ft from the soil, and has a growth of 4ft, with a spread of frond proportionate to its height and size. This giant is of the variety *T. pellucida*, but specimens of *T. superba* are not less remarkable. Beside these varieties there are *T. barbara* from Australia, and *T. hymenophylloides* from New Zealand.

With each springtime comes a crest of new fronds; the autumn finds a corresponding decrease of the older ones.

Adjoining is a large tropical house containing many more issues of the Captain's researches in foreign lands. Some have grown too large, and have been made the victim of the "woodman's axe." Others are trending upwards and recalling the many years of absence from their native homes. Tree Ferns such as *Cyathea*s and *Dicksonias*; Palms like *Areca sapida*, bearing its annual seed cluster; *Kentias Fosteriana* and *Bellmoreana*, *Dracaena Draco*, Cycads, *Chamaerops excelsa*, *Strelitzia regina*, *Musa*-like in size and vigour, and *Araucaria excelsa* are a few of the many tropical subjects that are so interesting. *Lycopodiums* grow splendidly under the shade of the Palms and other taller plants, and, occupying large shallow pans, are made conspicuous by their luxuriance and proportions. *Adiantums*, *Davallias*, *Nephrolepis*, and *Microlepias* are other well-grown plants, a fine specimen of *Adiantum Mariessi* being uncommonly good.

In the stoves are large bright specimen *Crotons* (*Codiaeums*) *Warreni*, *Queen Victoria*, *majesticum*, and others, besides a host of smaller ones in greater variety; *Anthurium crystallinum*, *Alocasia metallica*, the flowering *Anthuriums Andreanum* and *A. Ferrieriense* are fine; *Allamandas nobilis* and *magnifica*, *Eucharis*, the beautiful *Davallia fijiensis plumosa*, and *Nephrolepis rufescens tripinnatifidum* were notable. An immense *Musa Cavendishi* grows in one of the stoves, and in the same house overhead wires support many *Nepenthes*, growing and pitching well. *N. Sedeni*, *N. Northiana*, *N. formosa*, *N. mixta* (good), *N. Morgani*, and *N. Rafflesiana* are some varieties grown.

Of Orchids there is a representative collection, embracing *Dendrobies*, *Angræcums*, *Cypripediums*, *Odontoglossums*, *Oncidiums*, and many others, which in their season give useful flowers for cutting, and interesting subjects in a growing state.

In the greenhouses are specimen *Bougainvilleas*, *Statice*s, *Rondeletias*, *Stephanotis* (this grows well under greenhouse treatment, flowering abundantly in summer), and a host of other kindred plants. Very striking, too, were the *Streptocarpus* hybrids growing in 8in pots, the vigorous leaves recurving so that the pots were almost hidden, and the flower spikes proportionate.

Grapes, Peaches, Nectarines, Melons, Cucumbers, and Tomatoes give of their abundance in their season, but at Frenchay, as elsewhere, outdoor crops felt the dire effects of the spring frosts, and prospects for the winter are not so pleasant.

Espalier and pyramid Apples and Pears do well in the red soil of Frenchay, but this year barrenness predominates. Mr. Rye, for more than twenty years, has been a constant and successful exhibitor of both plants and fruit, more than an average share of silver cups, medals, and other valuable prizes bearing credit to his own skill as a cultivator, and the generous interest of Captain Belfield, whom he has so long and so worthily served.—W. S.

**Dendrobium × Venus.**

This handsome and large-flowered hybrid resulted from *D. Falconeri* and *D. nobile*. The stems are long and slender, and of the parts of the flower, the sepals are bright rose at the tips, paler at the bases; the petals are white, tipped with rose, and the lip has a rich maroon blotch, without any yellow in the throat. No *Dendrobium* can stand so much rest as this one, and it must have it, in order to assure its flowering. Sometimes it is rather shy in this respect.

The Week's Cultural Notes.

The spikes of *Calanthe Veitchi*, *C. vestita*, and their varieties are now advancing rapidly, and the plants must be so placed that they receive the maximum of light. The leaves are beginning to give way, consequently root action will be very sluggish, and no good purpose will be served by watering at all freely, while manure will also be wasted. Keep the plants well apart, avoid damping the spikes or bulbs, and keep the temperature well up. In a stagnant, cold atmosphere the colour of the flowers will be poor and washy, but give the plants the opposite condition, and there are few more beautiful sights in winter than they.

Zygopetalum Mackayi is a winter flowering species that comes in with the *Calanthes*, but requires different treatment. It is ever-green, and forms bulbs and growth at the time the flower spikes are also developing. Here, then, is a case for ample nourishment right up to the time the blossoms open. I have had large, old plants of this species under my care a yard and upwards across, and these seemed able to stand almost aquatic treatment. But it is different with weak and badly rooted — perhaps overpotted — specimens, and I know of few *Orchids* more difficult to rescue from an unhealthy state, or more easily managed when strong and well established.

A more difficult plant in most hands is *Z. maxillare*, the reason being that it is almost impossible to persuade the roots to enter any compost, no matter how carefully prepared. It thrives best upon a block made of a piece of Tree Fern stem, this being partially sunk in a pot filled with crocks. It is now in flower, and sufficient moisture must be allowed to keep the growth in good condition, while the spikes must not be allowed to remain on long enough to distress the plants. This pretty plant is often kept far too hot, and the cool end of the *Cattleya* house is quite warm enough for it. In greater heat thrips, its worst insect enemy, attacks it, weakening and eventually killing the plant.

The Butterfly *Oncidiums*, *O. Kramerianum* and *O. papilio*, are still producing a few flowers, and must be kept warm, and allowed ample light. Remove a little of the sphagnum moss from about the roots if it appears to be holding too much moisture, and cut away a few of the older spikes. Although these would probably flower again if left on, the blossoms will be larger and brighter in colour from the new spikes, these usually pushing in plenty during the early summer months. Remove *Dendrobium chrysanthum* to a warm house after flowering if growths are starting, and keep it gently moving during winter. Just before the new roots appear, *i.e.*, when the growths are about 4 in long, is the most suitable season for repotting.—H. R. R.

A Talk on Ferns.*

Considerable care is required in raising Ferns from spores. A shallow pan should be used, half filled with broken pieces of pots, or, better still, with mortar from an old wall, and then filled within one-half inch from the top with fine sifted soil, which should be scalded with boiling water, and drained, before the spores are sown, so as to kill the germs of fungus or insects detrimental to the growth of young Ferns. The spores should be scattered over the surface without covering them with soil. A pane of glass should be put over the pan, and the latter should be placed in a saucer of water, which will keep the soil sufficiently moist. Keep the pan well shaded until the spores are visible as minute plants.

The chances of getting new varieties by intermixing are not very great, but it is the only way to get any at all, except, perhaps, a chance seedling. In selecting the spores care should be exercised to take them from that portion or form of the plant which is most desired. For instance, if a crested form is wanted, the spores of the crested part of the plant should be taken, and the certainty of getting crested seedlings is thereby much increased. The minute plants should be taken up in small patches and pricked off carefully, and when they are established and fit to be handled they should be divided and potted off singly. Plants that have several crowns, or have creeping rhizomes, are easily increased by division. Some species produce small bulbs alone, or at the end of the frond. If those are removed and placed on soil they form plants.

A preparation of soil which suits almost all Ferns is a mixture of two parts of good loam, one part of sharp sand, and one part of leaf mould. The latter is indispensable in raising Ferns to perfection. If the soil does not contain sufficient lime a sprinkling of the same will be found very beneficial. Repot-

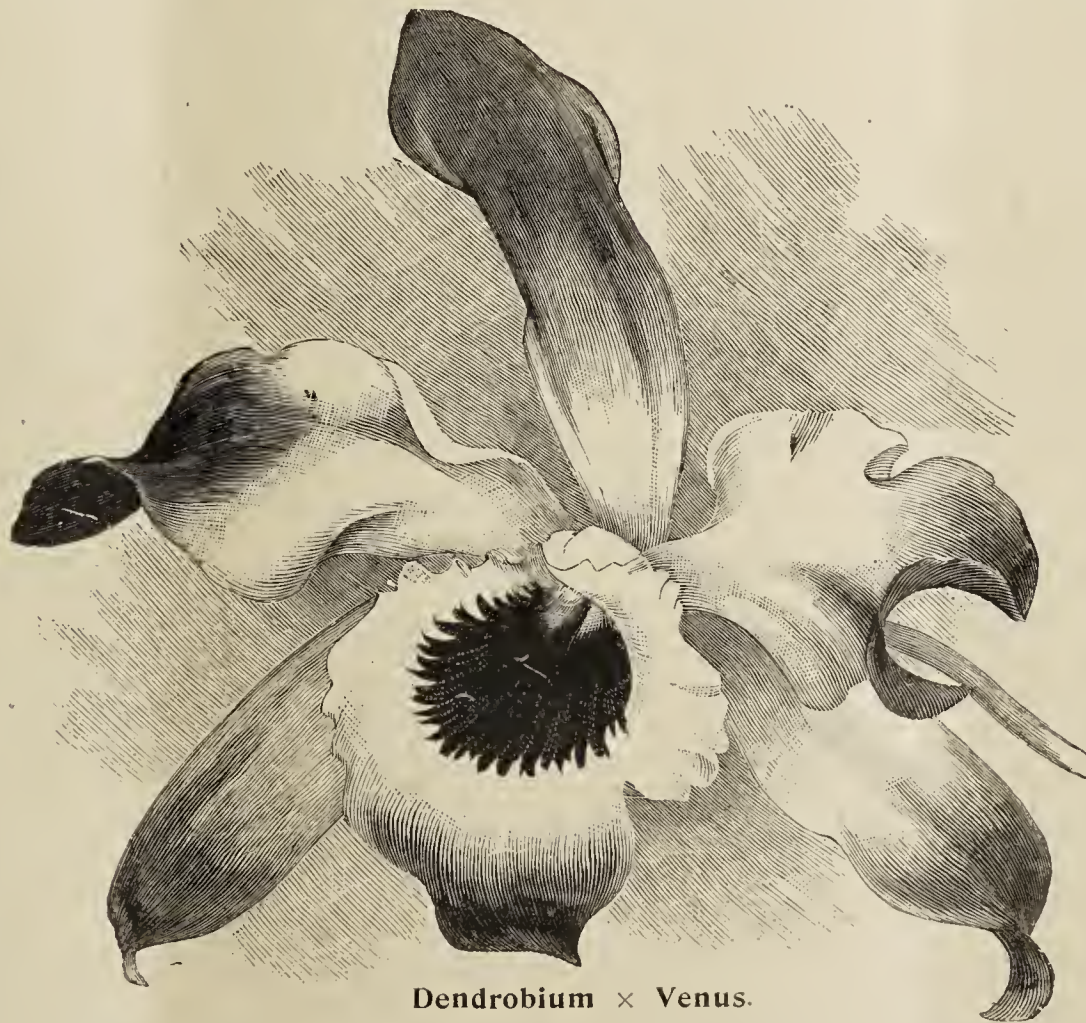
ting of Ferns should not be overdone, as it is known that the most luxuriant growth is made when the inside surface of the pot is covered with a network of roots. Ferns like moisture, and the absence of water is shown by the shrivelling of the old fronds.

In herbaceous plants, or plants with woody texture, the young growth wilts first. If the latter stock has been kept too dry the ball can be soaked and the plant will recover; but with Ferns it is quite different, as this treatment has seldom any effect on them, with the exception of a few varieties. Repotting can be safely performed at any time of the year, but the best time in the stove house is in February, and in the cool house in March. In any case it is best to repot before the plants start to make young growth. The pots should be clean and dry, as in any other case the rootlets will

stick to the sides of the pots; and if the plants require repotting again, they will suffer greatly, as it will be found impossible to remove them from the old pots without breaking a quantity of live roots. New pots will absorb a great quantity of water; therefore they should be soaked in water and dried again. As the first and second waterings would be absorbed by the pots, the balls will become dry, to the detriment of the plant. Although Ferns need moisture at all times of the year, drainage is most important. In their natural state most of the Ferns grow in partly decayed vegetable matter of a soft texture; therefore they should be potted firm, but not hard.

Moisture, proper atmosphere, and temperature are the most essential; the soil is only of secondary consideration. The ventilation should be managed so that the plants are not in a direct draught; but a close, stuffy atmosphere is more injurious than an excess of ventilation, and more so in the stove

* By N. Butterbach, before the Monmouth County (N.J.) Horticultural Society.

**Dendrobium × Venus.**

house. A Fern house should, whenever possible, be built from north to south, and the plants shaded from the strong rays of the sun, although retaining all the natural light possible. Blinds of unbleached muslin, fastened on the inside, under the roof of the house, we have found the best for this purpose.

One of the most useful, and a very old favourite Fern, is *Adiantum cuneatum*, or Maidenhair Fern. It is of easier culture than most any other Fern, and adapts itself to almost any soil and situation. If it is kept moist at the roots it will produce the whole year around an abundance of fronds. It is generally raised from spores, but can be easily propagated by cultivation of the crowns. *A. cuneatum gracillimum* is a variation of the above, and one of the most elegant Ferns. The fronds attain a height of from 1½ ft to 2 ft, and are densely tufted. This variety is reproduced true from spores, and is of very easy culture. *A. formosum* is a strong, handsome greenhouse species, and attains large size. It is very useful for house decoration, and is also of easy culture. It succeeds well in a greenhouse temperature, but if cultivated in stove heat the fronds become much larger, and the plant will make a fine specimen. It is raised from spores and by division of the rhizomes.

A. Ghiesbreghtii, or scutum, is supposed to be a variety of *tenerum*. It makes a beautiful plant for decorative and exhibition purposes. *A. peruvianum* is one of the most ornamental stove species of the large growing *Adiantums*. Its graceful fronds are borne on wiry, long stalks from 12 in to 18 in in length, the fronds from 2 ft to 3 ft. *A. tenerum* is a stove species, of elegant habit and very large dimensions. It grows wild in Florida on the river banks, and its fronds are from two to three feet in length. If sufficient room is allowed it, this Fern makes a grand exhibition specimen. *A. cuneatum grandiceps* is highly decorative and robust. It has densely tufted crowns and the fronds are more elongated than in *A. cuneatum*. Its branches are smaller, and the fronds have an arching habit which makes it suitable for hanging baskets. *A. caudatum* is a stove species, different from the majority of *Adiantums*. It is a very useful Fern for baskets, and if suspended, its fronds can be seen drooping two or three feet.

A. Capillus-Veneris imbricatum is the handsomest of the *Capillus-Veneris* varieties. The fronds are borne on slender stalks, pendulous, from eight to ten inches long. The appearance of this plant is that of *A. Farleyense*, but it is of dwarfer habit. It is classified as a cool house Fern, but with us it does best with greenhouse treatment. Its graceful cut fronds are used for dinner table decorations, and the plant makes a first-class house Fern. *A. Farleyense*, undoubtedly the handsomest of all Ferns, has attained such a degree of popularity that any description, however complete, would fail to do it justice. It is supposed to be a natural sport of *A. tenerum*; but whatever it may be, it shows admirably the gardener's skill, and draws attention wherever exhibited. Its fronds are gracefully drooping. I have seen plants grown with fronds 2½ to 3 feet in length, and the pinnules, or leaflets, 1½ in broad; and they were grown entirely in pure fibrous loam. They require a temperature of from 70 to 75 degrees at night, and plenty of moisture. Attempts have been made to raise this Fern from spores, but without success, consequently it is propagated by division of the crown.

A very useful Fern for decoration, and a very good house plant, is *Cibotium Schiedei*. Although an arborescent Fern, its trunk never attains a height of over two or three feet when artificially grown. It is of free growth and its fronds are elegantly drooping, measuring sometimes from six to eight feet. In closing, I must not forget to say a good word for another genus of Ferns which demands a space in every greenhouse, however small, viz., the *Nephrolepis*. They are valuable as house plants, for rockwork, decorations and baskets. They are most tenacious of life, and will stand a treatment which no other Fern would.

Lilium Harrisi in the Flower Border.

It is a common enough experience to find the Japanese *Lilium auratum* purchased for border planting, and a fine object it makes when soil and surroundings agree. It is not so common to see the Easter Lily treated thus, though its claims would seem to be fully deserving. There is something very chaste and aristocratic in the presence of a fine clump of *L. Harrisi* growing and flowering in the garden border, and where this quality is valued and striking objects are a desideratum in the garden landscape, these Lilies ought to invite a passing claim.

We have seen fine bunches of *L. Harrisi* staged among bunches of herbaceous flowers this summer, and in such company their chaste waxen trumpets stand out with conspicuous purity and grandeur. In a growing state this is even more striking. Among beds of *Rhododendrons*, *Azaleas*, and similar shrubs there is a fine opening for these Lilies; and in their

season of blossom, which is August, the lawns and borders come in for a good share of patronage and inspection. They may not probably survive a winter's rigour as will *L. auratum* in *Rhododendron* beds; but they are not so expensive as to make an annual planting prohibitive. Remarks overheard at the flower show when these Lilies were displayed in competitive collections of hardy flowers, convince one that their use as border plants is not quite a common experience.

Usually associated with the greenhouse, and grown in pots, these Lilies are by many regarded as tender and unsuited for any other purpose. Those who doubt the question have only to procure bulbs and plant in springtime in suitable positions, and in suitable soil. Ordinary garden soil enriched with leaf mould and peat will do; but the better the larder the finer results may naturally be expected.

On the chance of their safe passage through the winter in the open, a covering of leaves, as cocoa-fibre, may do much, and for this to be successful the position should be dry. If necessary, they may be forwarded in pots preparatory to their final planting in the open, and by periodic planting it would be possible to keep up a display for some time in positions that would bring them within easy range of inspection. In the herbaceous border they would be in good company.—R. A. W.

What the Lady Cook has to Say.

"The Man Who Serves the Kitchen" makes out a rather strong case against cooks as a body (page 236), their unreasonableness and general contrariness. Well, cooks are only human, and subject to many infirmities of the flesh and temper, I grant; but yet have they not sometimes cause for complaint? I think so.

The first subject that occurs to me is a great one, that of the Potato. We need supplies, and bountiful supplies, of this vegetable 365 days in the year. It is not a new introduction, and many men have given up their best years to its cultivation and improvement. There are all sorts of Potatoes on the market and in cultivation; first earlies, second earlies, in all their variety, and the main croppers are numberless as the sea sand. And yet (I grieve to say it), I find such difficulty in getting good tubers late in the summer. The earlies are all right, but it is those which come in before the main crop is ready that I find fault with. They are too old to be good, treated as "New," and not mealy enough for the steamer. I grant it is not for long the trouble lasts; but during the time there are constant complaints from the powers that be, and even the servants throw out hints about "pig stuff." Perhaps, indeed, the servants complain before their betters. I do wish all gardeners would make this between-seasons Potato a speciality. No cook can do herself credit with unripe, badly matured stuff.

Then, again, why do gardeners so like to hold over Peas and Beans till they get a "bone" in them? They do detest to gather these things early. Never mind about the first lots being a bit small, let me have them, small if you like, but young, tender, and sweet! I suppose they don't bulk up enough, but that is no concern of the consumer. I often, too, experience a difficulty between Asparagus time and the early Pea. There is a scarcity of good vegetables then, often. For this blank I don't altogether blame the gardener. I know springs are adverse; but still comes the cry from the dining-room, "We should like two dishes of green vegetables, please, cook."

Small stuff, too, for salads, is often bad to come at, and why, oh! why, should the supply of little Onions ever fail? To my mind a salad without Onions is a thing of naught: insipid, flavourless. Could there not be a succession of sowings? But perhaps this is my ignorance.

Horseradish and Salsafy I should like a bit bigger. If only the gardener had to grate the poor, thin roots that come in to the house, he would know! Then why, too, are spring Cauliflowers so often only beautiful miniatures, and why do spring Cabbages take so long to heart? Indeed, they may oftener be classed among summer vegetables rather than spring.

Turnips are much in demand in the kitchen, and though the white are good enough as early varieties (ninety-five per cent. water), I should so prefer for flavour the attractive Swede. These are not so full of fibre and general toughness as their white brethren. Would it ever be possible to have the young Carrots a little sooner? They are so invaluable for soups and hashes; in fact, almost indispensable. I also like a smooth-skinned Artichoke rather than the nobbly variety; there is not so much waste in peeling. My sisters and I have come to stay. We shall make great demands on the gardeners, but we shall also lean to the side of carefulness. We know the value of a vegetable diet, but we also know how to utilise scraps and odds and ends. We shall be no friend to the swill-tub, but at the same time we shall ask for, and expect to get, in our vegetable basket the best of everything.—F.

**Azalea amœna.**

The pretty bush evergreen *Azalea amœna* is one of the best known of all the family. It is so unlike any other; and then, being hardy and evergreen, is so much in its favour, to say nothing of its lovely rose-coloured flowers. But the exact colour depends on situation; sometimes it is almost crimson. In very severe winters the foliage will be a little damaged, but the wood rarely. As soon as the sap rises in spring the flower buds begin to expand, and by May this bush is in its glory when in vigorous condition. As with all *Azaleas*, it stands pruning well, and when it gets old is much improved by being cut well back. And it likes good food, too. Feed it well and prune it occasionally, and vigorous shoots result, which give abundant bloom.

Spiræa Thunbergi.

This shrubby Japanese *Spiræa* (which we illustrate on page 337) is undoubtedly one of the finest hardy subjects in every way that are known and grown in British gardens to-day. Perhaps some of our readers who were at the gardeners' dinner noticed the twiggy growths with the green linear leaves that Messrs. Veitch's decorator had used with his flowers. These were growths of this *Spiræa*. Then in spring it is a splendid shrub for forcing, the plants being grown in pots. It is naturally the earliest of all the shrubby *Spiræas* to bloom, and where its beauty is not marred by inclement weather, it is effective and graceful. A light soil and sheltered aspect are what it enjoys. The flowers are white, and the leaves bright green, becoming crimson in autumn.

The Vitality of Seeds.

A correspondent writes to the "Evening Standard": About the year 1859 the railway from Ware to Buntingford was in progress—a cutting was being made through a pasture field, when the workmen came on an entirely different soil, which was of a black colour, in which were numerous remains of Roman pottery and some Roman coins. In the following spring there came up a heavy crop of scarlet Poppies for some yards, next to them a crop of Henbane, and further on a crop of Rape, or *Brassica napus*. Nowhere else in the neighbourhood were any of these plants to be met with, not even the Poppies. The seeds must have lain dormant from the time of the Romans, when there had evidently been three plots of ground in cultivation, so sharply and clearly divided were the three crops.

Culture of Libonia floribunda.

As a greenhouse plant there are few more worthy of cultivation than the above. Insert the cuttings in March in a 48-pot. They will strike freely in a compost of turfy loam and silver sand, the pots to be placed in a gentle hotbed. When rooted pot singly into three inch pots, using three parts of turfy loam, one part old cow manure, one part silver sand, with some small pieces of charcoal. When established, harden off and grow in a cold frame, shift into "forty-eights" before the roots are matted together, and never let the soil become dry. In September move the plants into the greenhouse, affording them a light position and a temperature of 40 degrees to 45 degrees. The plants will flower freely from January to April, and will not disgrace the dining table or the drawing-room, the small bright green foliage with the orange and dark brown flowers being very effective. After flowering, move them into a temperature of 55 degrees to 60 degrees to make new growth, harden off, then move them outdoors. *Libonias* make nice standard plants. Cut off all side shoots until 18 inches high, then stop as required to make a nice head 18 inches over, which they will do the first season with but little care. Place a plant in the centre of a fruit-stand with fruit round it. Place the stand in the centre of the dining table, and with a good plant of *Gesnera* on each side the effect is most beautiful, especially by gaslight. The *Libonia* will not flower in a high and moist atmosphere.

Fruit Trees on Dinner Tables.

To eat fruit fresh from the trees at a banqueting table is one of the latest luxuries of English epicures. Certain fruiterers in the West End (says a London paper) are now making preparations for an abundant supply of dwarf fruit trees laden with Cherries, Peaches, Pears, and Apples for ornament and dessert at the dinners of the coming season. The tiny fruit trees, which, although four or five years old, are only some 3ft. high, not only make a delightful table decoration, but produce delicious dessert.

The Cedars at Goodwood.

The death of the Duke of Richmond and Gordon serves to recall the fact that the Sussex seat of the Lennox-Gordon family is "Glorious Goodwood," rich in its mighty trees and broad glades, and, above all, in its unrivalled view of the English Channel. The park at Goodwood is seven miles in circumference, and contains the famous racecourse. It is also remarkable for its wealth of imported acclimatised trees, prominent among which are the Cedars of Lebanon, the Cork tree, and the evergreen Oak. The Cedars of Goodwood were planted in 1762, and are exceedingly well grown for their age, and add greatly to the splendour of this noble park.

Physalis peruviana edulis.

One rarely sees a plant of this old greenhouse shrub. At the Norfolk Nurseries, Dereham, there is a specimen planted out at the back of a lean-to house, where it no doubt had been many years, and where it flowers and fruits freely, and Mr. Green stated that the ripe fruits have a considerable attraction for the employer. The flowers are circular, buff yellow, saucer-shaped, and have round the centre five purple spots; the fruit is yellow when ripe, and snugly enclosed in a brown calyx. The plant does well in a greenhouse or vinery, and might be grown with advantage. It is known as the Cape Gooseberry, the common English name come of its popularity at the Cape of Good Hope. It is said that its fruit makes an excellent tart, and what is known as Cape Gooseberry jam is made from them.—R. DEAN.

To Make Hydrangea Flowers Blue.

If *Hydrangeas* are grown in a tolerably strong maiden loam which contains a portion of oxide of iron, the flowers will come blue without further trouble; but the plants will require to be potted into this said compost and continually grown in the same from the cutting pot. Watering with a solution of alum for some time previous to flowering will benefit them greatly. The solution may be made by mixing at the rate of one ounce of alum to a gallon of rain water. Plants should be struck from cuttings of the soft wood from February to May that are required to bloom in those months the following year. It is advisable to flower them in seven inch pots, allowing the plants to produce one cluster of flowers, removing side shoots to strike, as the old plants are not to be depended upon to produce blue flowers the second year.

New Lily, Stephens' Hybrid.

Mr. F. W. Stephens, of Bermuda, successful grower of true *Harrisi* Lily bulbs, has for several years past been experimenting with seedlings of the best Bermuda grown *Lilium longiflorum*, pollenised from selected *Harrisi*'s, aiming to get a bulb which would retain the health and evenness of the former, while it took on the earliness and freedom of the true *Harrisi* strain. He has this year succeeded in raising two bulbs of fifteen inches circumference, the picture of health, and as much alike as two twins, the product of two four-inch bulblets of last autumn's planting. The scars at the top of stems show that each had thirteen flowers, and by comparing them with the *L. Harrisi* and *L. Doeii* (which is the best and earliest *longiflorum* hitherto) it will be seen that they have intermediate characteristics of foliage and bulb. Especially noticeable is the pronouncedly pointed, free, and somewhat twisted petalage of the new bulbs, promising extra early forcing quality. Mr. Stephens will grow the scales of these two bulbs in special ground this coming season, and expects to raise a carefully segregated lot of bulbs true to this new type, which he will in due time exhibit, and, if successful, introduce as Stephens' Hybrid.—PAN (in "American Florist.")



Pot Culture of Fruit Trees.

The value of this method of cultivating Peaches and Nectarines cannot be over-estimated. In establishments where the demand for fruit is large, and where fruit houses are limited, pot culture of fruit trees should specially recommend itself. Houses that are occupied with fruit trees in summer may during the winter be filled with Chrysanthemums, Azaleas, bedding stuffs, or other plants that need protection.

There can be no doubt that from trees trained on trellises occupying a whole, or part, of a house we get a good supply of fine fruit, but it has this disadvantage, that too many fruits are ripe at the same time, and must of necessity be gathered and used immediately, as, unlike Grapes, they will not hang until required; consequently, there is for a time an over-abundance, and then none at all. Now, with trees grown in pots, this would not happen, for where we grow one tree on a trellis we can grow half a dozen or more in pots, in one or more varieties, and in different stages of growth; and instead of one tree and a supply of fruit of short duration, we have several trees giving us a prolonged supply, in sufficient quantities to be easily disposed of. This is an advantage of considerable importance where a long supply of fruit is required.

In commencing the culture of fruit trees in pots, it is better to begin with trees specially prepared for the purpose. The pyramid is the form of tree best adapted for this method of culture; but where there are lofty houses standards or half-standards may be used if desired. Whichever form is decided on, trees of a fruiting size should be obtained; by so doing much time will be saved.

When the trees arrive from the nursery it will be necessary to repot them; shake away some of the old soil, and cut off all suckers; drain the pots thoroughly, and use good turfy loam, to which may be added some lime rubble, wood ashes, and a little bonemeal; pot firmly, and leave a space of a few inches on the top for a summer dressing. When completed stand outside with a slate under each pot to keep out the worms. To prevent breakage by frost cover the pots with ashes or some other suitable material.

Before forcing operations commence, the heads of the trees should be overhauled and the necessary pruning done; very little will be needed if disbudding has been properly attended to, other than shortening long or unripened shoots, shortening being advisable for pot grown trees. The time for moving the early ones inside will depend on the time the fruit is required; but six or seven months should be allowed from starting to finish. When the trees are in bloom assist them to set their fruits by keeping the house dry and airy, and by a daily use of the camel-hair brush upon the flowers. As the late varieties show signs of expanding flowers they must be placed under shelter; but when the fruit is set, and all fear of frost past, they may be stood in some sunny spot outside. This will have a tendency to still further retard them; they must, however, be placed inside again as they show signs of ripening, or as the early ones are brought out.

During summer, when the trees are growing fast and swelling fruit, they must have an abundant supply of water, or disappointment and failure will be the result. Further, having only limited root space, feeding should commence early, and be continued until the fruits commence to ripen. A top-dressing of rich loam and horse droppings may be given in space left at potting time, when the fruits are about an inch in diameter. When the roots have taken possession of this, manure water from the cow sheds, dissolved bones, and other fertilisers may be used alternately with clear water with good results.

As the leaves turn yellow and begin to fall off, repot any that need it, though this will hardly be necessary more than once in two years, or remove a few inches of surface soil and top-dress with the material as advised for potting. This will destroy some fibrous roots, but that is of little consequence. The same sized pots will do for a number of years, and large crops of good flavoured fruits may be obtained for five or six months out of the twelve.—P.

Pines.

PLANTS SHOWING FRUIT.—These will be valuable when the fruit is scarce and dear, therefore afford such plants the best positions in the fruiting department. Maintain a temperature of 70deg at night, 75deg artificially by day, up to 85deg to 90deg with sun, closing at 85deg, sprinkling the paths when their sur-

face becomes dry, and occasionally the plants on fine afternoons. Keep the bottom heat steady at 85deg to 90deg. Examine the plants once a week for watering, and if any require it afford a supply of clear liquid manure at about the same temperature as that of the beds. Care must be taken not to overwater the fruited, as that has a tendency to cause the fruit, when cut, to be black at the centre.

PLANTS TO FRUIT EARLY.—Queens are the best for this purpose, but there is not always a certainty of their doing so unless they are given a period of comparative rest after making good growth. Plants intended for starting at the new year should be kept in a temperature of about 65deg in the daytime by artificial means, 60deg at night, ventilating at 70deg, closing at that, and allowing the bottom heat to fall to 70deg to 75deg. Water the plants only when necessary, but do not allow them to become so dry as to cause the foliage to become limp.

YOUNG PLANTS.—All young stock should now be arranged so as to obtain the fullest benefit of light and air. As the sun diminishes a corresponding diminution of temperature must take place at night, until it reaches the winter standard of 55deg to 60deg at night, and 65deg in the daytime. Ventilate freely whenever conditions are favourable, paying particular attention to watering. Examine plants about once a week, and whenever one needs water give it copiously at about the same temperature as the bed.—PRACTICE.

The Loganberry.

This will become one of the indispensable fruits of the near future. Already it is found in almost every garden, and in noble estates it has been cultivated beyond the tentative stage, till at last breadths of it are being added in suitable places, and generally with great success. Beyond the fact that the fruits (of which Mr. Geo. Shayler's drawing is a life-size representation) are pleasant to eat as taken from the bushes, the robust growth and leafage of the plant is ornamental, either on walls, palings, or trellises. The Loganberry can be grown similarly to Raspberries, though we believe a lighter soil, or one of richer but more porous texture than Raspberries do well on, is helpful to its establishment.

The ruddy-brown calyces are characteristic features of the summer's earlier growth. Messrs. J. Veitch and Sons, Ltd., of Chelsea, received a First Class Certificate this year for their samples of this novelty, but it is in the hands of the entire trade—all the nurserymen—so that stock is easily secured. The fruits are nearly black in colour, with a flavour "slightly more acid than a Blackberry," and with a faint Mulberry addition.

Raspberry Culture.

The Raspberry is usually propagated from suckers; these are taken up and planted in November. The ones found growing at some distance from the parent plant are the best for the purpose, as they generally lift with an abundance of fibrous roots. Almost any situation seems to suit Raspberries, but the finest fruits are produced on plants grown on an open piece of ground. The plot of ground upon which it is intended to form a plantation should, before planting, be well trenched, and plenty of well decayed manure incorporated with the soil. Firm planting is necessary.

The arrangement of the plants depends a great deal upon circumstances. One method is to plant three bushes together in the form of a triangle, the whole being supported by a stout stake. The rows should be 5ft apart, and 3ft between each group. This is a serviceable arrangement where space is limited. Another system, and the one most generally adopted in private gardens, is the espalier system. Wires are run the desired length, supported at each end and at intervals along the length by iron posts. The distance between the rows should be five or six feet, and allow two feet between the plants. For the dwarf-growing varieties, four feet between the rows will be sufficient.

It is the practice of some growers to prune the young canes immediately after planting. This operation, however, is best left until February, just as the plants are beginning to move.

ESTABLISHED PLANTATIONS.—So soon as the fruit crop is over cut out the old fruiting canes and tie in loosely the young canes to prevent them being broken down; remove all weakly shoots, and leave five or six canes to each stool. When the leaves have fallen, shorten back the canes to about 5ft, and tie them securely to the supports. Clear all rubbish away, and apply a top-dressing of well-decayed manure, to which has been added some wood ashes. Beyond keeping the ground clear from weeds and suckers, little attention will be required until May, when another top-dressing may be applied. During the growing and fruiting seasons plantations on a light soil will need frequent waterings. Manure water may be applied with beneficial effect as soon as the fruits are set.

LATE FRUITS.—If space permits, a few canes of autumn fruiting varieties should be planted. The treatment is similar to the earlier varieties, with the exception of the pruning. Cut the canes right down in January or February, and thin out the shoots as soon as they can be handled, retaining only the most vigorous. The fruit will be produced at the top of these shoots in the autumn.—G. R., Waddesdon.

Lightning and Trees and Plants.

It is a matter of individual opinion, and, as such, must therefore be taken for what it may be worth; but my personal belief is that the forecasts of the weather, which appear in so many newspapers, if they have advantages, have also their objectionable side. People are led by these to study the weather too much, and, as a consequence, they attribute various aches and ills to its influence, with which it has little or nothing to do, and trouble themselves about atmospheric changes, which seldom come when they expect them.

Speaking generally, it is the idlers who are the weather students, but gardeners must be excused for being somewhat observant of its moods. Their successes and failures are largely dependent upon it; their occupation has to be carried on, at times, under watery influences by no means cheering, though during such showers as we had last July both the gardener and the field labourer are obliged to pull up for a while. We hear occasionally of field labourers being injured in a thunder-storm, seldom of gardeners; the reason is obvious. On a field persons are more likely to become marks for the electric current than in a garden, where chimneys may not be far distant, and probably a variety of shrubs or trees are growing about. Indeed, though many would not think so, a wood is one of the safest places to be in during a storm, if it has no very tall trees.

It has long been a subject for speculation, and will continue to be, whether, under one species of tree, we are exposed to more peril than under another; but we have ceased to believe in a curious idea which had prevalence centuries ago. So far as we can judge, its origin was in the East; but it was imported to these Western countries. Various trees and plants had the repute of being accumulators or resting places of lightning; they received it from the sky, and could send it forth again. To the lively imagination of the ancients lightning was not an electric current; it appeared to be a worm, a fiery serpent, an arrow, or a forked wand; a flower or leaf might be its symbol, and its receptacle a tree. Amongst those named are the Ash, Hazel, Whitethorn, and that mystic plant the Mistletoe. Even some birds, such as the woodpecker, were thought to be connected with lightning.

Hindoos of the present day attribute extraordinary virtues to a Mimosa, which is one of the lightning trees; it has the power of curing diseases, and is an especial protection against the dreaded influence of the "evil eye." Another tree connected with the celestial fire is called the "Palusa"; it has a red sap, and scarlet blossoms, therefore by its appearance suggestive of flames.

The Mountain Ash, familiar to us in Britain, is one of the trees presumed to be a receiver of lightning or owing its origin to the current. From the brilliancy of its scarlet berries this tree came to be regarded with admiration, mixed with awe, even by those who did not look upon it as a lightning species. To this hour, in the Scotch Highlands, a cross of Rowan is carried by maidens to protect them against unseen dangers. Germans fix a twig above the door of a house for good luck.

Not a tree is it casting much shade, but how would it be to stand near the Rowan during a storm? Well, there seems to have been a difference of opinion about the dangerous nature of lightning plants; people did not shun the Rowan, but they were afraid of the common Ash.

There was a saying, "Avoid the Ash, it counts the flash"; yet we might have thought the strength of its wood rather a safeguard against serious injury from the electric current. Frequently the Ash is seen growing in positions where it is much exposed to the weather. In passing, we notice the fact that few plants flourish under the shade of this tree; the reason must be, we presume, an effect arising from its drip. This would mean that the rain carries down something in solution from branches or leaves, possibly of an astringent nature.

Sacred both to Pagans and Christians was the Hazel, a tree of many virtues, also a lightning plant; some believed it to be a product of the sky. Yet it was not thought perilous to approach it in a storm; indeed, the Christian legend accounting for its sacredness was that while en route for Egypt, the Holy

Family found temporary shelter under a Hazel. By the old Pagan belief this tree was one specially dedicated to the deity Thor. In some parts of the Continent a twig is cut when it is leafing, and on the first thunder shower a cross is made with it over corn in granaries, the supposition being that this will preserve the grain from mould or insects. A bit of Hazel put inside the window-sill was supposed to prevent the entry of lightning into a house.

One odd fancy about the tree was that a profusion of its nuts indicated the approaching arrival of a large number of infants! Then the Whitethorn, Hawthorn, or May tree has also a place amongst the lightning species. Before the Christian Era the Greeks and Romans regarded this tree with reverence, and by both nations its flowers and leaves figured conspicuously in the marriage ceremonial. One cause for the Christian regard it received was the tradition that

from its branches Christ's crown of thorns was made. Yet there was a general objection to bringing branches of Hawthorn into dwelling-houses; but people stuck them over the doorways during May.

The Oak, associated with fairyland and a host of legends, had also the repute of a lightning origin, and it was a serious thing to fell one of these trees of ancient date, unless a strong reason existed. But, though a sacred tree, it had no immunity from the lightning flash, and persons have often been struck when standing beneath an Oak. This has occurred sometimes through Oaks standing solitary, being planted as landmarks at the borders of estates. It has been suggested that the Oak is more frequently struck by lightning than other trees, because it is apt to be gnarled and twisted with numerous projections on its trunk. The comparative immunity of the Beech, again, has been attributed to the fact that its trunk is smooth, offering no points of attraction. Indeed, an effort was made by some to prove the Beech is never struck by lightning; but there have been undeniable cases.

The Mistletoe, always highly revered, but particularly sacred when growing upon an Oak, was supposed to be an embodiment of the lightning, and its forked branches had a significance to many, "Thunder-besom" being one of its names. Like



The Loganberry, natural size.

other lightning plants, its potency varied. When brought into houses, Mistletoe was believed to give protection against fire; also it kept off nightmare or evil dreams if placed at the bedside.

According to tradition, the plant was propagated by birds that were the messengers of the gods, and they carried the seeds in their bills to deposit them upon branches of trees that were suitable for their growth. Special repute attached to the missel thrush; also, it seems, to the woodpecker. It was thought dangerous to cut the plant off Oak or Hazel. From its being a plant of the gods, Mistletoe was reputed to cure fits and other diseases; also it stopped the effect of poisons.

Then the so-called Springwort was a lightning plant full of mystic powers; but it was not easy to find, and now its identification is doubtful. Only we know that it was a low growing plant. For some reason or other Grimm thought this was a species of Spurge, the Caper, or Euphorbia lathyris; it has a crimson stem. Actually, it is a very poisonous plant, and great harm has been done by its rash administration internally. One idea about it was that if a portion of the plant was buried in a hole upon a hill, a storm coming over that hill would be divided and soon dispersed. The Westphalian folk gather our Orpine, or Live-long, as a preservative against the stroke of lightning. In some countries the St. John's Wort is believed to be effective; but they must be plucked before sunrise. Stonecrop and Houseleek were grown upon roofs on the supposition they gave protection to the abode.—J. R. S. C.

Colours in Foliage and Flowers.

All who are accustomed to observe vegetation must have been struck with the great variety of shades of green which the foliage of different plants presents. It may also be noticed that the same description of plant will exhibit very characteristic differences, not only at different stages of growth, but at the same stage, in different conditions of luxuriance, as affected by the external conditions of soil, season, and manuring; but especially under the influence of different conditions of manuring.

From some researches made at the Rothamsted Experimental Station on this subject, it was found that the green chlorophyll formation in plants has a close connection with the amount of nitrogen assimilated, but that the carbon assimilated is not in proportion to the chlorophyll formed. Further, it has been found that the presence in the soil of certain mineral or ash constituents of plants, and especially of potash, is essential for the assimilation of carbon, no starch being formed in the grains of chlorophyll without the aid of the element potash.

In regard to the colours of flowers, it has been found by Dr. Hansen that there are three distinct pigments which make up the different tints, in addition to chlorophyll, which forms the green colouring matter in the stems and foliage of all plants. These colours are yellows, reds, and blues.

The yellows are mostly in combination with the plasmic sap, while the others exist chiefly in solution in the cell sap. The yellow pigment forms an insoluble compound with fatty matters, and is termed lipochrome.

Orange is formed by a denser deposit of yellow, and the colour in the rind of an Orange is identical with that found in many flowers. The red in flowers is a single pigment, soluble in water, and decolourised by alcohol, but capable of being restored by the addition of acids.

Lipochrome, combined with this red pigment, produces the scarlets and reds of Poppies, and the hews of Roses and Hawthorns; but the varying intensity of reds in Roses, Carnations, and Pæonies, and other flowers, depends on the presence of a greater or lesser quantity of acids in the soil or in the manure employed. This may be one of the reasons why superphosphate of lime, which is always more or less acid, forms such an excellent manure in the growth of most flowering plants.

The blue and violet colours are also decolourised by alcohol, but are reddened by acid solutions. Florists have already succeeded in producing many unusual colours in flowers, and there seem to be very good grounds for believing that it is possible so to manipulate Nature by means of chemical manurial agents that she will produce blossoms of every conceivable tint and hue.—J. J. WILLIS, Harpenden.

REMARKABLE APPLE TREE.—A correspondent has written to the editor of the "Daily Express" as follows: "I have an Apple tree with three crops of Apples and bloom at the same time. It has the first and ordinary fruit; then, having bloomed again, there is a crop of Apples about the size of bantams' eggs; once more it bloomed, and there is now a third crop with fruit about the size of a marble. Since then it has bloomed again."

NOTES

NOTICES

Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, October 13, in the Drill Hall, Buckingham Gate, Westminster, 1 to 5 p.m. A lecture on "Autumn Strawberries and Raspberries" will be given by Mr. Jas. Hudson, V.M.H., at 3 o'clock.

Mr. and Mrs. D. P. Laird's Silver Wedding.

Mr. and Mrs. David Pringle Laird, Pinkhill, Murrayfield, have just been presented with a handsome silver lamp on the occasion of their silver wedding, by the employés of R. B. Laird and Sons, Ltd., nurserymen, Edinburgh. The presentation was made by the oldest employee, Wm. Deas, Mr. Laird very suitably replying. Mr. and Mrs. D. P. Laird were married at Truro, Nova Scotia, on September 30, 1878.

Annual Dinner of the "Provident" Society.

The seventeenth anniversary dinner will be held at the Holborn Restaurant, High Holborn (Royal Venetian Chamber), on Tuesday, October 27, 1903, at 6.30 p.m. Peter Barr, Esq., V.M.H., has kindly consented to preside. The secretary will be glad to know, not later than Saturday, October 24, the names of persons attending. Tickets 5s. each; morning dress.—W. COLLINS, Secretary, 9, Martindale Road, Balham, S.W.

Beckenham Gardeners.

The Library Committee forward a copy of the syllabus of lectures for the coming winter session. The library and reading-room at the Church House is open every Friday evening, October to March (inclusive). There are over two hundred members, by whom books may be borrowed on application. All the lectures are public and free. The new syllabus is very varied and of a high order of merit as regards the subjects.—MARK WEBSTER, The Gardens, Kelsey Park, Beckenham.

Ipswich Gardeners' Society.

The third session (1903) has begun, and the following are the papers read or to be read:—October 1, Culture of Apples and Pears and their commercial importance, Mr. W. Seabrook, fruit grower, Springfield, Chelmsford; October 15, The Evolution of a Flower, lantern lecture, illustrated by micro photos from nature, Mr. A. Martinelli, St. John's Road, Ipswich; November 5, Pollination and Fertilization of a Flower, Mr. E. Creek, Westerfield House Gardens; November 19, Discussion, Chrysanthemums, &c., December 3, the Judging of Horticultural Exhibits, &c., Mr. W. Messenger, Woolverstone Park Gardens; December 17, The Carnation, its types, culture, and uses, Mr. R. Dean, V.M.H., Ranelagh Road, Ealing.

Second Crops of Plums and Strawberries.

The year 1903 will be remembered by fruit growers and market gardeners as one of the most remarkable they have known. In the fertile Vale of Evesham a mild February brought a fine show of blossom on the fruit trees, but there were disastrous frosts in May, and the Plum crop was a failure. Pershore Plums, which in prolific years have sold for a shilling a pot (of 72lb), made this year from ten shillings to over a sovereign. Last week Damsons were sold in Evesham for 42s. the pot. This month, however, there are more Plums to be seen in the plantations than during June. This is due to a heavy second crop. Naturally, the fruit is not so well grown, and the flavour is not so good, but both Victorias and Pershores are making more money than the first crop sometimes does. There is also a second crop of Strawberries and Raspberries, while Blackberries are very plentiful, and are being bought by the jam boilers. Apples and Pears (says the "Daily Mail") have been a great failure in the Evesham district, and the vegetable crops were hardly up to average. Further evidences of the eccentricities of the season come from other quarters. A second crop of Plums has been gathered at Dedworth, near Windsor, and ripe Strawberries at Kingsclere, Hants, and various parts of Devonshire.

Appointments.

Charles Nevil, as head gardener to Major Grant, Bishop's Hill, Walton-on-Thames. * * Mr. Henry C. Durnford, as head gardener to R. M. Caulfield, Esq., Broadhanger, Petersfield, Hants. * * Mr. George Gregory, as head gardener to G. H. Taylor Whitehead, Esq., Compton Castle, North Cadbury, Bath.

Temple House Gardens, Great Marlow, Bucks.

The register of rainfall here for September, 1903, was 2.49in, and for September, 1902, 1.15in. During the month of September, 1903, rain fell on sixteen days. We had thunder on the 4th, a hailstorm on the 11th, a very rough gale on the 10th (when several large trees and branches were blown down), and foggy mornings on the 13th, 17th, 22nd, 23rd, 24th, and 27th. The maximum temperature for September, 1903, was 82deg on the 2nd; and the minimum 35deg on the 16th. The maximum for September, 1902, was 72deg on the 1st; and the minimum 34deg on the 18th.—G. G.

Sussex Weather (September).

The total rainfall at Abbot's Leigh, Hayward's Heath, for the past month was 3.41 inches, being 0.64in above the average. The heaviest fall was 0.83in on the 10th. Rain fell on fourteen days. Total rain for the nine months 28.25in, which is about 8in above the average. The maximum temperature was 77deg on the 1st and 2nd; the minimum, 35deg, on the 17th; mean maximum, 66.14; mean minimum, 48.16; mean temperature 57.15deg, which is a little above the average. The dull, showery weather which prevailed during August continued to the 12th of this month. From then to the 21st we had it colder, but dry and brighter on several days; but since the latter date we have had rain on six days to the amount of 1½in. It is, however, warmer, and green crops are making better progress than they were doing.—R. I.

September Weather at Belvoir Castle.

The prevailing direction of the wind was S.W., total 7 days. The total rainfall was 2.98in, this fell on 19 days, and is 0.66in above the average for the month; the greatest daily fall was 1.10in on the 10th. Barometer (corrected and reduced) highest reading 30.546in on the 15th at 9 a.m.; lowest 28.922in on the 10th at 9 p.m. Thermometer: highest in the shade 73deg on the 1st; lowest 35deg on the 17th; mean of daily maxima 63.70; mean of daily minima 47.53; mean temperature of the month 55.61deg; lowest on the grass 31deg on the 17th; highest in the sun 127deg on the 1st; mean temperature of the earth at 3ft 55.26deg. Total sunshine, 152 hours 55 minutes, which is 1 hour 35 minutes below the average; there was one sunless day. The above mean temperatures are again much below the average. The total rainfall for the nine months ending September is almost 3in above the average.—W. H. DIVERS.

Paper on Apple and Pear Culture.

The winter session of the Ipswich Mutual Improvement Society commenced on Thursday, October 1, and in spite of the unpropitious weather a goodly muster of members heard the paper on "Apples and Pears," read by Mr. Seabrook, of Springfield, Chelmsford. Mr. Youngman, of Charsfield, occupied the chair. In introducing his subject, Mr. Seabrook referred to the large imports of fruit, which he considered might be produced at home. He strongly advised intending planters not to take up too much land at the start, but rather to sink all their money in a small holding, planting bush trees and small fruits, in preference to covering a large area with standard trees. Orchards upon grass came in for particular condemnation, the returns in the essayist's opinion being considerably inferior to those obtained from land under cultivation. In conclusion, Mr. Seabrook gave a selection of Apples and Pears, which flourished with him, and invited the members' discussion of the subject. This was taken up with vigour by the chairman, Messrs. Notcutt, Cotton, A. Creek, Whittel, Rush, and others. Mr. Seabrook was accorded a hearty vote of thanks on the proposition of Mr. Notcutt, seconded by Mr. A. Creek. Several interesting exhibits were staged for inspection. Frewer Bros., Stowmarket, sent about four dozen large blooms of Show, Fancy, and Cactus Dahlias, including several new varieties. Mr. James showed some heavy clusters of Tomatoes, and Mr. Whittel brought some nice plants of *Kochia scopiaria* in small pots.—E. G.

Death of Mr. William Plant.

Mr. William Plant, of Timperley, Manchester, a well-known horticulturist, died recently from an apoplectic fit. Though a native of Northwich, much of his life was passed in the Timperley district. After serving as lecturer on horticulture to the Cheshire County Council, he began business as a florist at Broadheath, and it was chiefly through his efforts that the Altrincham and District Gardeners' Improvement Society, of which for some time he was chairman, sprang into existence. As one of the old members of the Manchester Botanists' Society he was an intimate friend of the late Mr. Thomas Rogers, and of the late Mr. James Percival, of Smithy Bridge.

New Head Gardener for Birmingham Parks.

The Baths and Parks Committee of Birmingham has appointed Mr. William H. Morter to the post of head gardener (or chief park keeper) of the Birmingham City Parks, rendered vacant by the retirement of Mr. Samuel Hearn, after thirty years' continuous service with the Corporation. Mr. Morter has had a very large and varied experience in the treatment and laying out of ornamental flower gardens, the construction of lakes, and the formation and drainage of walks, carriage drives, &c.; also in the maintenance of turf land, the cultivation of shrubs, and the planting of various trees on the estate of Lord Avebury, at High Elms, Farnborough, where he has been employed as head gardener during the past eleven years. It is expected that he will take up his new duties on the 1st of November next. He has been appointed at a salary of £180 per annum.

New Head Gardener at Hopetoun House.

The important appointment of head gardener to the Marquis of Linlithgow at Hopetoun House, South Queensferry, has been conferred on Mr. Thos. Hay, son of Mr. Robert Hay, South Castle Street, Cullen. Mr. Hay served his apprenticeship under Mr. Brander, Duff House, Banff, after which he went south. He was at Terregles Castle, Dumfries, for three years. An opening as foreman occurred at Hopetoun Gardens, when under Mr. Smith he was chosen, and gained favour by his constant application and study of floriculture. The head gardener having been head gardener. At the wish of the Marchioness, Mr. Hay to take by degrees a more responsible share of the duties, and these have been carried out in such a way as to gain the confidence of the proprietor, who has given him the entire charge as head gardener. At the wish of the Marchioness, Mr. Hay, recently made a tour through England visiting a number of high-class gardens, and making himself acquainted with the most recent modes of culture, and otherwise qualifying for this important position of trust.—("Banffshire Advertiser.")

South-Eastern Agricultural College, Wye, Kent.

The South-Eastern Agricultural College, Wye, commenced its tenth session on September 25. Seventy-seven students are in residence, this number being an increase of twenty-two on the number at the commencement of last session. The equipment of the college has been improved by the addition of a carpenters' shop and of an ironwork shop, fitted with lathe, and three hearths for farriery and other forge work. A forestry department is also in course of establishment, additional land having been taken for the purpose. The college Hop-garden fortunately escaped the full severity of the recent gales, and gave a yield of 13cwt per acre of very fair quality Hops. Through the instrumentality of Mr. Edwin Ellis, one of the Surrey governors of the college, a Southdown flock has been established, thirty-three ewes and a ram having been presented by the following well-known breeders:—The Dukes of Devonshire and Northumberland, the Hon. H. Cubitt, Messrs. Brassey, Cosmo Bonsor, Coleman, Czarnikow; E. Ellis, Plumpton; whilst Mr. Ellis has also lent a ram from his successful flock. The thanks of the college and all connected with it are gratefully accorded to all these donors for their generosity and public spirit. It is intended to maintain the Kent flock as well, and to carry out experiments on cross-breeding. The equipment of the farm has also been improved by the erection of a range of breeding styes for housing ten sows of different breeds; whilst bullocks of different breeds are being fed this winter, all these trials being carried on for the information and benefits of the students.



Cultural Notes.

Plants growing to produce large blooms, whether for exhibition or home decoration, should now be under cover, except in the case of those intended for very late blooms. Plants developing early buds cannot be retarded out of doors after they show the colour of their petals; therefore it is better to take them inside and have the benefit of the flowers, as moisture on the buds, no matter whether it be from rain or heavy dews, quickly causes the petals to decay.

Plants intended for extra late blooms still out of doors should have some slight protection at night in the case of frost, as this is likely at any time now. Frost upon the buds quickly injures the calyx, thus preventing perfect development of the florets. The smaller the buds the more easily are they affected. Light tiffany stretched on poles will ward off several degrees of frost; in fact, all that may reasonably be expected for some time yet. Plants under cover must have abundance of air; a too sudden change from outside conditions to a warm greenhouse, for example, cannot be an advantage to the plants. If the weather keeps warm and dry, an occasional syringing of the foliage will be an advantage, say once a day.

MILDEW AND RUST.

If the plants show signs of rust or mildew, they, of course, should not be syringed; quite a dry, buoyant atmosphere is what is best in that case. Mildew upon the leaves in serious quantity should be got rid of as quickly as possible, or the leaves will fall off the plants prematurely, and that would be injurious. A plentiful supply of foliage assists the development of the blooms, not only in size, but in the quality and solidity of the florets as well. A slight attack of mildew may be met with dusting the leaves with sulphur; that of a brown colour is best. It is quite as efficacious, and has not the objectionable colour of the ordinary.

It is not enough to apply the sulphur to the surface of the leaves only; the underneath side should be dusted also. A pair of Malbec bellows is the easiest means of applying the sulphur. In a case of bad attack more drastic measures should be taken to rid the plants of this fungus. The most effective method of ridding the plants is the following. Lay the plants on their sides, syringing them, thoroughly wetting every part with the following mixture: Place 2lb sulphur and 2lb lime, which has not been slaked, in ten quarts of water, and boil for twenty minutes.

For syringing on the plants use two wineglassfuls of the mixture to four gallons of clean, cold water. A syringe with the jet affixed, causing a single stream, is the best method of applying the liquid; by placing the forefinger over the orifice the liquid can be directed upwards and spread over the plant, where required. If a slight discolouration of the leaves follows from the sediment of the mixture, it will not be injurious, but can be removed if desired by a vigorous washing with clean water.

HOUSING.

Ample space should be given the plants; overcrowding is a great mistake. Far better grow fewer plants than spoil all. The foliage must be retained until the blooms are half developed, at any rate; longer if possible. Abundance of light overhead is an absolute necessity, or weak peduncles will be the result, and how can good blooms be expected through weakened flower stalks? Too often the plants have to be crowded into vineries or Peach houses, where at times, owing to an existing crop of fruit, as much light cannot be given the Chrysanthemums as is desirable.

If the crop has been removed from the Vines there is no harm in cutting back the shoots coming from the spurs to within a foot of their base, provided the Vines are in a proper ripened condition. Vineries facing south with a tolerably high roof afford a capital site for Chrysanthemums, arranged in bank-like form to face the path, which usually runs parallel to the back wall. Here the plants obtain ample light as the leaves fall from the Vines; if these latter are early varieties, so much the better.

The aspect which the Chrysanthemums occupy dispenses with the necessity for shade for the plants. This is a convenient manner, too, in attending to the plants, and produces a capital effect when in bloom.

As previously stated, abundance of air night and day is

an absolute necessity, especially at first. Extra care will be needed in supplying the plants with water at the root. Whereas the soil required watering twice daily when the plants were outside, they may not require it once a day now.

FEEDING.

By no means allow the plants to suffer for want of it. Whatever is needed, give it in the morning, so that surplus moisture will be dissipated before night, as the air can then be kept in more buoyant condition. Stimulative food should be regularly given; in fact, every time the plants require water, provided, of course, whatever is given is not too strong. Liquid from sheep, cow, or deer droppings, with a little soot added, cannot be excelled as a stimulant. A change to Clay's fertiliser, Standen's or Thomson's manure will be beneficial.

Backward plants may be hastened by giving them a pinch of nitrate of soda once, powdering it finely, sprinkling it over the surface, and watering in at once. Plants that exhibit a lack of chlorophyll, or colouring matter, in the leaves may be improved by a judicious use of sulphate of ammonia. Plants that have not an abundance of roots should not have this chemical. Dissolve one tablespoonful in four gallons of weak liquid manure, and apply it to the plants once a week. Some growers sprinkle the ammonia on the surface of the soil, and water it in; but this, I hold, is dangerous to the surface roots. These should be encouraged in every way, as they are the main feeders of the plants.

Some growers advise that feeding be discontinued as soon as the bloom buds show colour; but in my opinion that is just when assistance is required to develop the blooms. Continue to feed the plants until the blooms are three-parts expanded. I need hardly say that weak growing sorts should not be fed so often, nor with so strong a stimulant, as the more vigorous.

INSECT PESTS.

Insect pests, especially earwigs and snails, must be closely watched for and destroyed, as both of these are strong enemies. In addition to trapping the earwigs in the usual way with Bean stems, lengths of Bamboo cane and rolls of cloth thrust amongst the foliage, carefully examining them every morning, they must be searched for by artificial light when they are at work upon the succulent florets. The least shake of the plants disturbs the insects; quietly search for them with a lamp, and pick them off with a pair of steel tweezers. Slugs and snails quickly play havoc with blooms, especially the incurved sorts, which seem to have an especial temptation for large brown snails. Directly their presence is detected by the slime they leave on the plants, pots, or walls, rest assured they will come again.

The best trap is a handful of bran sprinkled on the pots or floor. To this they quickly resort, when they should be caught at night. See that all peduncles of a weak nature have sufficient support to prevent snapping off by their own weight as the flowers expand.—E. MOLYNEUX.

Four Good Chrysanthemums.

The quartette of flowers named and figured on page 333 are found in the front rank of exhibitors' collections in this year of grace, and they have been duly respected since first they became known a few years since. As varieties they are each distinctive, and they possess the grand merit of vigorous constitutions. Beyond this there is nothing one need say further in their praise, and if any of our readers have cultural hints they can add beyond what we have published heretofore, pray let them pen a note. But we extend the invitation to Chrysanthemums in general, for the reign of the Autumn Queen has begun, and the chroniclers should keep apace.

Securing Terminal Buds.

The majority of the buds it is possible to select now are those known as terminals. Many varieties produce the best flowers on these buds, while others will only produce them small and late. Plants for decoration and cutting from are almost invariably grown with terminal buds, size of bloom's not being so important as good colour, quantity, and form. Abundance of flowers can also be secured, but it is usually best to regulate the number by partial disbudding. If the largest possible blooms must be secured on terminal buds, the disbudding of the side buds must be commenced early, the central bud in the cluster then swelling and developing to a large size.

Shoots bearing several flowers are appreciated for cutting as sprays, as well as for remaining on the plants, which serve as decorative specimens in groups in greenhouses, conservatories, or verandahs. More formal specimens trained and tied with the blooms equidistant must be confined to single flowers on each shoot.

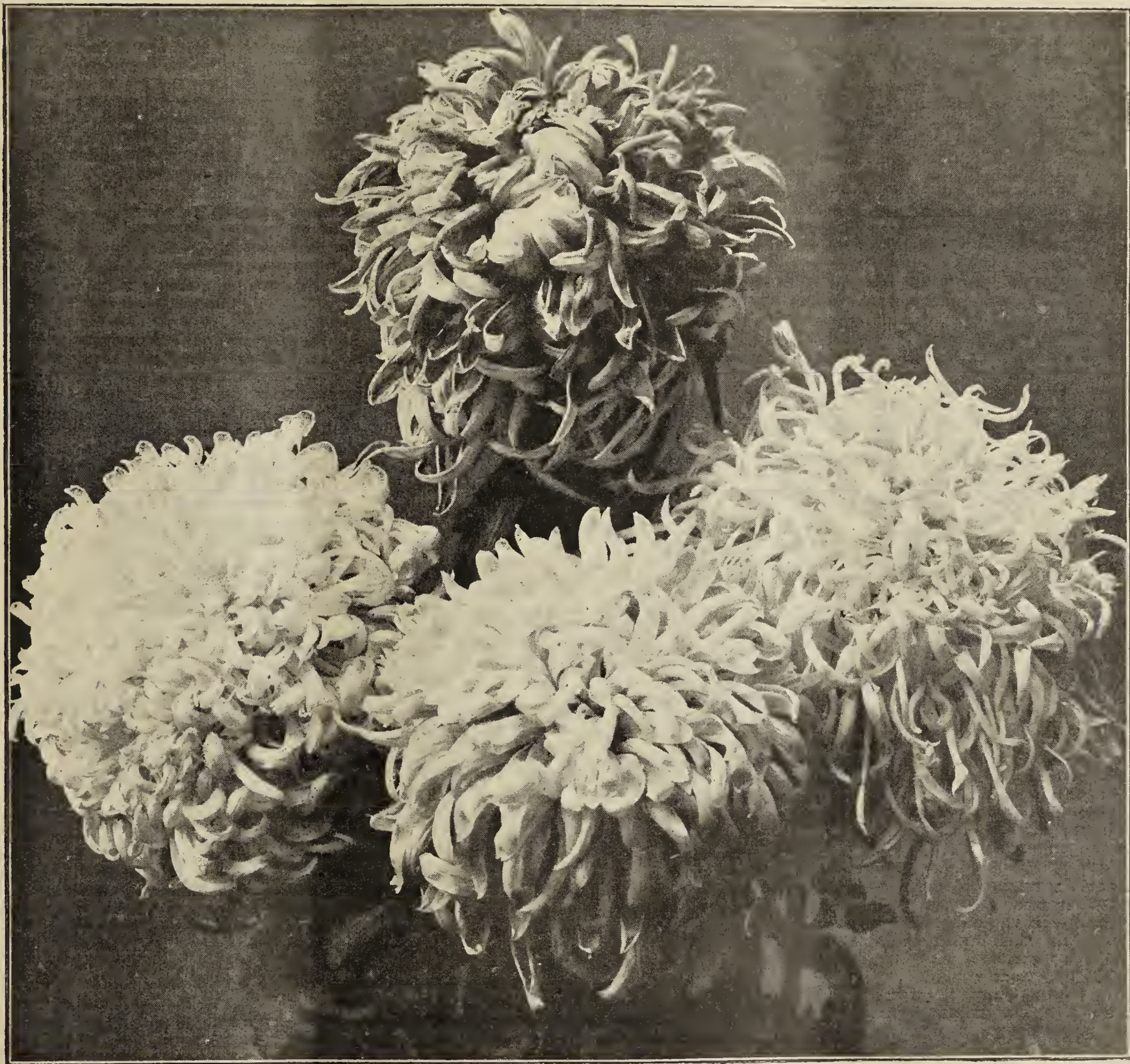
ENEMIES.

The most troublesome insects to Chrysanthemums after housing are earwigs, and sometimes green fly makes its appearance. Traps should be set for the former, these consisting of folded strips of brown paper placed among the plants, or small pots half-filled with hay inverted on sticks. Another good trap

is hollow Bean stalks, into which the insects crawl and hide. Blow them out every morning and kill. The green fly is readily destroyed by vaporising the structure soon after the first housing. More insidious, and more difficult of eradication, are fungoid enemies, mildew and rust. It is a good plan to syringe the plants before housing with sulphide of potassium at the rate of 4oz to 2gals of water. Repeat this on two or three occasions for rust. One application will probably destroy mildew. Very badly infected leaves should be picked off and burnt. Caterpillars sometimes prove troublesome, and may soon destroy many petals in a flower if not searched for, caught, and destroyed.—E. D. S.

present arrangement with the Crystal Palace Company is fortunately only for this year. Mr. Geo. Caselton, the garden superintendent at the Palace, greatly assisted with his staff in arranging the show, and Mr. R. Dean seemed fresher than he has lately done.

It is of interest to know that there are 130 societies in affiliation with the "National"; and the number of members on the books is 645. The financial position of the society is satisfactory, the balance in hand at the end of last year being £68 9s. 6d. Ever and again, however, one hears mournful murmurs to the effect that the N.C.S. is not flourishing—is, in fact, on the downward grade. That it is not flourishing (i.e.,



MADAME CARNOT.

AUSTRALIE.
MRS. BARKLEY.

MADAME G. HENRY.

Chrysanthemums.

Autumn Show of National Chrysanthemum Society.

Tuesday added another to the rainy days of this unpropitious year, and on Tuesday and Wednesday the early exhibition of the National Chrysanthemum Society was held. With a most disastrous season, and the change to an outlying exhibition place—the Crystal Palace, to wit—the October show of 1903 must be recorded as all but a failure so far as Chrysanthemums are concerned. It could have been called with equal or more justice, an Apple or a Dahlia show.

For twenty-six years the society's exhibitions had been held in the Royal Aquarium, now razed to the ground, and the

forging ahead) is true; but it is more than merely pessimistic to say that it is in a decline. We hope to see it accomplishing good work for many years to come.

It ought to be clearly understood that all exhibitors at the society's shows must be members. At the present show, and the others to follow, we believe we are correct in saying that the institution of a payment of entrance fees by exhibitors is new, and we are curious to know how far this might have affected the entries at Tuesday's show. The judges were Mr. M. Gleeson, of Stanmore, and Mr. A. Jefferies, of Harlow.

Only one new variety received the F.C.C., namely, a dim

lilac-pink seedling Jap. named Renée, with flowers of good depth, from Mr. T. Bullinney, Camus Park Gardens, Edgware.

DIVISION I.

Open Classes—Cut Flowers.

There were but two competitors for the group of Chrysanthemums and foliage plants, the first prize being awarded to Messrs. J. Peed and Sons, West Norwood, for a nice display, in which the foliage plants appeared to better advantage than the Chrysanthemums. Mr. R. Foster, Nunhead Cemetery, second with a pretty decorative group.

CUT FLOWERS.—In the class for twenty-four blooms (Japanese) in not less than eighteen varieties, there were three competitors, Mr. Jas. Brooks, gardener to W. J. Newman, Esq., Totteridge Park, Totteridge, being awarded the first position with a good stand, composed chiefly of white, yellow, and lilac varieties. They were represented by Mrs. T. W. Pockett (good), Madame Gustave Henry, Marquis V. Venosta, J. R. Upton, Mrs. R. Darby, Mrs. H. Emmerton, Mrs. G. W. Palmer, Mrs. W. Popham, Scottish Chief, Mr. A. H. Barratt, Mrs. J. C. Neville, Soleil d'Octobre, Miss Alice Bryon, Lady Crawshaw, M. L. Remy, Lily Mountford, Pride of Exmouth, Godfrey's Pride (good), and Soleil d'Octobre.

Mr. W. Ring, gardener to J. Warren, Esq., Capel House, Waltham Cross, made a good second, having a better display of colours. The best were Bronze Soleil d'Octobre, Kimberley, Madame P. Rivoire, Mrs. T. W. Pockett, Miss Elsie Fulton, Mrs. J. Bryant, and Mutual Friend; while Mr. H. Perkins, gardener to the Hon. W. F. D. Smith, M.P., Greenlands, Henley-on-Thames, brought up the rear with a good exhibit.

In the class for twelve blooms Japanese, distinct, there were four contestants, the first prize being awarded to Mr. J. Boakes, gardener to J. Dixon, Esq., Edenhurst, Sevenoaks, who had a pleasing stand. The varieties were Madame R. Ray, Mrs. W. Popham, Marquise V. Venosta, Mme G. Henry, General Buller, Charles Longley, Elthorne Beauty, Soleil d'Octobre, Miss Elsie Fulton, Mr. C. H. Payne, Mrs. Greenfield, and Marjorie. Mr. Jas. Brooks was second, having in good form Mrs. A. R. Knight, Mrs. J. C. Neville, Sensation, J. R. Upton, and Mrs. T. W. Pockett; while Mr. M. Rayment, gardener to W. Beech, Esq., Romford, brought up the rear.

The class for six Japanese blooms, distinct, brought out three exhibits. Mr. A. Mackay, gardener to F. H. Bouden Smith, Esq., Danesbury, Hertfordshire, being a good first, having Mrs. G. Mileham, General Hutton, Mrs. C. H. Payne, Miss E. Fulton, Miss Lily Mountford, and Madame Gustave Henry in good form. Mr. J. Kirkwood, gardener to E. Wormald, Esq., Finchley, was a good second with nice blooms of Bessie Godfrey, Miss Elsie Fulton, and Sensation of fine colour, while Mr. G. Boakes was third.

For twelve bunches of early flowering pompons in eight varieties there was but a solitary exhibit, which came from Mr. E. F. Such, Maidenhead, and these were of a very poor character, staged without names too.

The class for two vases of twelve blooms of large flowering varieties, with foliage added according to the exhibitor's taste, though it only obtained three entries, was one of the best classes here. The first prize was awarded to Mr. J. Kirkwood for a fine exhibit; Mr. Jas. Brookes being a good second with equally well arranged vases; and Mr. G. Boakes third with a bold display.

EARLY FLOWERING VARIETIES.—There was but one entry in the class for twelve bunches of early flowering varieties from plants grown in the open air and not disbudded. This exhibit came from Mr. E. F. Such, Maidenhead, who made a really good display. The varieties were Mr. J. R. Pitcher, Ralph Curtis, Coral Queen, Goacher's Crimson, O. J. Quintus, Queen of Earlies, White Quintus, Horace Martin, Ambrose Thomas, Market White, Madame Desgrange and Bronze Masse.

Decorative Exhibits—Open.

The floral decoration of Mums for a dinner table of six feet by three feet with any suitable foliage brought out three entries, all the exhibitors using yellow varieties with bronze foliage, Mrs. C. B. Cole, The Vineyard, Feltham, being awarded first for a tasteful display. Mr. D. B. Crane, Highgate, was second; and the third prize was evidently not awarded. Miss C. B. Cole was the only exhibitor for three epergnes, and was deservedly awarded the first prize for nicely arranged vases of yellow and bronze.

Amateurs' Classes—Cut Blooms.

Section A, comprising classes 11 and 12, brought no entries; and class 13, in section B, for twelve Japs. in six varieties, was also unsupported. However, in class 14, for the twelve bunches of early flowering pompons, in six varieties, two came forward, but both were very poor. Mr. D. B. Crane was the leader, and Mr. A. Taylor second.

DIVISION II.

Open Classes—Cut Blooms.

For the six bunches of early flowering pompons, in vases, four entered, and Mr. E. F. Such had a fine set, including Md. Lefort, Blushing Bride, Mrs. Selby, and Flora. Mr. D. B. Crane followed next with Veuve Cliquot, Alice Butcher, Anastasia, Blushing Bride, Mme. Ed. Lefort, and Percy's Seedling. Mr. J. Kirkwood came third.

Mr. D. B. Crane, in class 16, was first for six bunches of early flowering varieties, those shown being Ivy Stark, Harvest Home, Horace Martin, Orange Masse, Goacher's Crimson, and Crimson Mdme. M. Masse. The second place fell to Mr. J. Brooks, Totteridge Park, with R. Curtis, Mme. M. Masse, Percy's Seedling, Robbie Burns, Victor Mew, and Crimson Marie Masse, Mr. Kirkwood was third, one of his bunches being Ralph Curtis. There were four entries.

For one vase of six yellow Japs, Mr. W. Ring, gardener to J. Warren, Esq., Capel House, Waltham Cross, led with Mrs. T. W. Pockett, the flowers being good; Mr. H. Perkins, Greenlands, Henley-on-Thames, was second with Hon. Mrs. Acland, a rich incurved Jap. There were no entries for six of a white variety; and for the half-dozen other than white or yellow the lead was with Mr. J. Kirkwood, Grass Park House, Finchley, with grand flowers of Mrs. Barkley; second, Mr. Perkins, with Mrs. R. Darby.

Pompons were staged in class 20, the winners for a vase (with suitable foliage) being Mr. Eric F. Such, from Maidenhead; Mr. D. B. Crane, Highgate, and Mr. J. Kirkwood, in the order mentioned. The only entry in class 25, for a vase of Chrysanthemums, came from Mr. Kirkwood.

Miss C. B. Cole beat Mrs. A. Taylor for the handbasket of blooms (c. 21), the first being in yellow, and very tasty. For a handbasket of garden flowers, Chrysanthemums and Roses excluded, Miss C. B. Cole again led, having Michaelmas Daisies; Mr. E. F. Such, second, with these and Solidago; and third, Mrs. Taylor. Miss Cole had a nice basket of autumn sprays with berries; Mrs. Taylor second; while for a basket of Roses Mr. Such beat Mrs. Taylor.

Amateurs' Classes.

Mr. W. H. Chalk, Slough, had the best six blooms of Japanese (Div. B.), and equal thirds were given to Mr. F. Wells, South Norwood, and Mr. W. Gooding, Edenbridge, Kent, the blooms being very fair.

For an epergne of flowers of the Autumn Queen, Mr. Crane beat Mrs. A. Taylor, of East Finchley.

Non-competitive Exhibits.

Messrs. John Peed and Son, West Norwood, London, S.E., were able to stage an excellent display of Turnford Hall Begonias, in 4in, 5in, and 6in pots, though the flowers at this season are much tinged with pink. From "Hobbies," Limited, of Dereham, there came perennial Asters, Roses, and Dahlias. The Roses were staged in bamboo tubes, and the varieties were Souvenir de Pierre Notting, Liberty, Corallina (a good autumn Rose). The best of the new Cactus Dahlias for garden decoration was the new Amos Perry, a strong flower of Cactus form, somewhat broadened petals, and rich, scarlet crimson colour. It has been certificated twice. The Tamarix was used in small vases effectively in front of the Dahlias.

Messrs. Wm. Cutbush and Sons, from Highgate, London, N., sent Dahlias, Asters, and Carnations. We were also pleased to note the autumn Crocuses, together with Montbretias, Morina longifolia, Campanula muralis, Lobelia tenuior. The latter was very showy, and the Carnations were strong. Mrs. S. J. Brooks is a fine white; Viscount Kitchener, a good flaked crimson; and Mrs. T. Lawson, of course, an excellent carmine-red Carnation.

Cannell and Sons showed their finely grown Cannas, in the same form as that so often seen from their nurseries. We would name Black Prince, Emile Lorenz, Miss Amy Ker, Rosemawr, C. Molin, and J. B. Van der Shoot as the most brilliant as seen here.

Mr. Wm. Angus, The Gardens, Penicuik, N.B., staged his new Chrysanthemum maximum King Edward, a good border flower, with large flower. It is the "king amongst Marguerites." Messrs. Spooner and Sons, Hounslow, staged a large collection of Apples. Mr. W. Seward, The Firs, Hanwell, W., staged his Tomato "Hanwell Victory."

Messrs. Cannell had an exhibit of market Chrysanthemums, such as Covent Garden White, Ryecroft Gold, White Quintus, Murillo (a lovely pale mauve and white), Harry Gover, and Miss B. Miller.

Mr. W. J. Godfrey, Exmouth, Devon, had Pride of Exmouth Carnation, a rose-pink variety, and some good Chrysanthemums: Yellow Prince, M. Marcel Mestivier, Harry Gover, Parisiana, October Rose, and Britannia. His plants of Fuchsia triphylla "Mary" were good.

Mr. Norman Davis, Framfield, Sussex, made a good display, arranged in bamboo stands, on boards, and in pots, with Asparagus Sprengeri and Panicum variegatum. The best were James Grant, Lady Pearce, Mrs. A. K. Knight, Kimberley, Madame

Paolo Radaelli, J. R. Upton, and Princess Beatrice. The best decorative varieties were Horace Martin, Goacher's Crimson, and Market White.

A fine decorative exhibit of Dahlias was staged by Messrs. T. S. Ware, Limited, 1902, Feltham, the whole being nicely arranged with Ferns, bamboo, and other greenery. The best Dahlias were F. H. Chapman, Mrs. H. J. Jones, Gabriel, Alpha, Artus, Kriemhilda, Mrs. Ed. Mawley, Ringdove, and Sandpiper. Messrs. Ware's single and double Begonias, too, from the open air, were quite a revelation to everybody.

Mr. Eric F. Such, Maidenhead, contributed a beautiful table of Chrysanthemums of the early type, with large vases of Pampas Grass and Asters, nicely arranged. The vases of Physalis Franchetti and Montbretias contributing to the display. The educational value of the exhibit was entirely lost through lack of naming the subjects.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, contributed one of the best displays in the show, in the form of early flowering Chrysanthemums and Asters. In the former were noted as being especially good Goacher's Crimson, Horace Martin, Hilda Blick, Mrs. W. A. Hobbs, Mrs. A. Willis, Miss B. Miller, Mytchett Beauty, and a promising set of seedlings. The Asters were beautifully displayed in large bunches, a few of the best forms being A. amellus, Stella, Framfieldi, Onward, A. cordifolius magnificus, A. C. Diana, A. Novæ-Angliæ, rosea, and Ryecroft Pink, also Mrs. Raynor, this portion of the exhibit being nicely arranged with Asparagus Sprengeri.

Messrs. Cheal and Sons, from Crawley, were the exhibitors of a magnificent bank of Dahlias, and a choice selection of Apples; and from Hugh Low and Co. there was also a display of Apples, numbering 150 dishes.

Medal Awards.

CRYSTAL PALACE COMPANY'S GOLD MEDALS to Norman Davis and W. J. Godfrey.

GOLD MEDALS to Messrs. Cannell and Sons, J. Peed and Sons, "Hobbies," Limited, H. J. Jones, Cheal and Sons, T. S. Ware, Limited, and Spooner and Sons.

SILVER GILT MEDALS to Messrs. Hugh Low and Co., and SILVER MEDAL to Eric F. Such.

Sir William Jackson Hooker.

(Continued from page 304.)

"In 1813, owing to the illness of his only brother, my father spent five months with him in Devonshire and Cornwall, which counties he diligently explored for Musci, Hepaticæ, and Lichens especially. The Trinity House yacht having been placed at his disposal, he visited the Scilly Islands, whence he writes to Mr. Turner: 'The first thing that caught my attention was the situation of the little town of St. Mary's which so much resembled that of Reikevik that I could hardly help fancying for some time that I was in Iceland.' Early in 1814 my father accompanied Mr. and Mrs. Turner and family on a visit to Paris, then in the occupation of the Allies. There, at the Institute, he made the acquaintance of the principal botanists resident in or on visits to the city—Antoine-Laurent de Jussieu, Desfontaines, Lamarek, Mirbel, Bory de St. Vincent, Thouin, and others. Leaving the party in Paris, he spent the remainder of the year botanising and seeing botanists, sketching and sight-seeing in the south of France, spending some days with De Candolle at Montpellier and in Piedmont, Switzerland, and Lombardy.

"Returning to Paris early in 1815, he was introduced to Humboldt, who engaged him to publish a cryptogamic volume of his *Plantæ Equinoctiales*. This intention had to be abandoned owing to the publisher's refusal to continue that work. After much subsequent correspondence with Humboldt, that led to nothing, my father commenced the publication on his own account, and produced in 1816, the first part of a work entitled '*Plantæ Cryptogamicæ, quæ in plaga orbis novi Equinoctialis colligerunt Alex. von Humboldt et Aimat Bonpland*.' It is a very thin quarto, with four plates of species drawn by the author, and exquisitely etched by Edwards. The expense was great and the return nil; the work was therefore abandoned, and of the remaining Musci and Hepaticæ many were included in the author's less expensive '*Musci Exotici*.'

"On June 12, 1815, my father married Maria Sarah, eldest daughter of Dawson Turner, and immediately started on a long wedding tour to the Lake District and to Ireland, which latter country the pair traversed in almost every direction, making sketches of scenery and ancient buildings; thence they went to Scotland on a visit to Mr. Lyell at Kinnordy in Forfarshire, with whom a close intimacy and correspondence on Hepaticæ had long existed. Returning they passed through Manchester for the purpose of seeing Mr. Hobson, a packer in a warehouse, who with only the works of Withering, Hudson, and the '*Muscologia Hibernica*,' had acquired a critical knowledge of British Mosses that surprised his visitor, who says of him: 'I never saw a man possessed of more enthusiasm than this poor fellow.'

"As alluded to by M. De Candolle [in a letter here omitted], Lindley, then a youth of eighteen, was at the same time as himself a guest of my father. He was the son of a well-known nurseryman of Catton, near Norwich, and had shown such zeal and ability as a local botanist that with a view of encouraging him in its pursuit he was invited to Halesworth, and to occupy himself there with translating Richard's '*Analyse des Fruits*.' This he did, introducing the author's latest corrections, and illustrating his translation with plates and original observations. In the following year my father took Lindley to Sir Joseph Banks, who offered him temporary employment in his herbarium, and introduced him to Mr. Cattley, a wealthy merchant devoted to horticulture, who was desirous of having his rare plants handsomely illustrated; and this again led eventually to the assistant secretaryship of the Horticultural Society of London, which Lindley occupied till 1858.

"The '*British Jungermanniæ*,' the most beautiful of all my father's works, in point of the drawing, analyses, and engraving of the plates, was concluded in 1816. It had occupied him for about ten years, and was the first work of any magnitude which he projected. It appeared in parts, in both a quarto and a folio form, with eighty-eight plates engraved by Edwards, illustrating 197 species.

"1817 is one of the very few years of his life in which he published scarcely anything. The exception was an account of the very remarkable European Moss named after his friend, *Tayloria spachnoides*, in '*Brand's Journal of Science and Art*,' No. 111, p. 144, and '*Musci Exotici*,' tab. 173. Of a visit to London in August of this year he writes: 'I met at Spring Grove (Sir Joseph Banks's) Abel, Brown, Leach, and a Mr. Manning of Diss, who passed many years among the Chinese endeavouring to get access to the interior, though he failed; though he tells me he saw much of Thibet.' Mr. Manning is, to this day, the only Englishman who ever entered the sacred city of Lhasa. What is more remarkable is that his journal was lost to geographers till Sir Clements Markham happily found it in the possession of a cousin of his own in Norfolk. See '*Narratives of the Mission of G. Bogle to Thibet and of the Journey of T. Manning to Lhasa*,' ed. 2, 1879, by Sir C. Markham, a book full of curious information.

"My father's Halesworth life was now drawing to a close. The brewery business, as might have been expected under the management of an enthusiastic naturalist and author, had proved unsatisfactory, and some of his investments were disappointing. Personally his *ménage* was entirely inexpensive and simple, and this was so throughout his life; but his lavish expenditure on his own unremunerative publications, and on the purchase and beautiful binding of expensive entomological, ornithological, and especially botanical and even archæological and artistic works, had crippled his resources, and he had now a wife and family of four to provide for.

"Under these circumstances he wrote to his friend Sir Joseph Banks requesting that he might be informed should he hear of any opportunity of applying his botanical knowledge to the improvement of his income. Sir Joseph promptly answered that the Professorship of Botany was vacant in the University of Glasgow, and that he was ready to use his influence to obtain it for him should he desire to become a candidate. My father answered favourably, and at once left for Spring Grove, where he was hospitably received by Sir Joseph, who told him that the emoluments of the chair, though small, would certainly increase; that it was freed from all medical duties; that a really noble botanical garden had been formed at Glasgow, to which the University had given £2,000 and the City £3,000, and towards the development of which he could assure him that Kew would place all its resources."—[A Biographical Abstract compiled by Irwin Lynch from a Life-Sketch sent to the "*Annals of Botany*" by his Son, Sir Joseph Dalton Hooker, F.R.S., V.M.H., G.C.S.I., C.B., &c.—*Journal of Royal Horticultural Society*.]

(To be continued.)

LARGE YIELD OF POTATOES.—A phenomenal yield of Potatoes of the "Sir John Llewelyn" variety was dug recently by Mr. J. Taylor, blacksmith, of Clun, Herefordshire. Mr. Taylor planted 11b of this sort in the spring, and the weight which they yielded was over 30lb.

TOMATOES IN A BAR.—At the present time, we are informed, one may witness Tomatoes growing on a plant in the saloon bar of a large hotel in Central London. A few months ago a young plant was introduced, the branches climbing up cane sticks, which, with a perpendicular upright, resembled a large kite. The temperature of the place is about 65deg Fahr., and now the plant is full of fruit almost fully matured.

THE STORMS AND THE TREES.—At Le Touquet, where the quaint old château is surrounded by about two thousand acres of beautiful woods, the foliage was quite green on the day of a recent storm, but on the following day it was changed to a muddy brown. This was not only on the side exposed to the wind, but was general, trees in sheltered places suffering in common with those which caught the full fury of the gale. It would be interesting to have this phenomenon explained.



A Great Disappointment.

As fate would have it, the district auditor cited me for the 29th ult. to attend at the Board Room at Bradfield, Berks, for the purpose of auditing my poor's rate for the parish of Sulhamstead. How much more congenial it would have been for me to visit the dear old garden at Chiswick, which has been familiar to me through all its successes and vicissitudes since the year 1835. I was for the first time taken there to a R.H.S. annual fête by the then president, T. A. Knight, as these pages of long, long ago have chronicled.* I mention it now to show how much I should have enjoyed, and grieved, being there for the last time, and also delighted to have attended the gardeners' dinner; perhaps, as a V.M.H., I may have been expected to attend. But district auditors are great potentates, and must be obeyed!

What with attending to voting lists, to jury lists, to assessment committees, and as churchwarden seeing to the completion of a thorough reparation and embellishment of our St. Michael's Church, and our harvest festival, you may conceive that your oldest contributor has spent a tolerably lively time lately. Besides the care—seeing to the “getting up” of and housing of my new strains of North American hybrid Potatoes—this has been a test year for them. They are behaving very well indeed, but it will take five to six years for the majority of them to be made fit for commerce.

By-the-by, what men we have in the Potato world nowadays! And what wonderful prices they are, it is said, receiving per lb for their new seedlings! Of course, we well know that the last well advertised Potato is the best. Nevertheless, I lay claim to be still taking the lead by introducing new blood, so to speak. I trust that disinterestedness, like in the honest, enjoyable old games of cricket, football, &c., are not departing from us in regard to the Potato.—ROBT. FENN, V.M.H., Sulhamstead, October 5, 1903.

The Gardeners' Dinner.

I am desired by the committee of the above to return you their grateful thanks for the generous help and support you gave this function in the pages of the Journal, thus helping to make it a most successful and memorable gathering of gardeners.—Yours very truly, OWEN THOMAS, Chairman of Committee.

Four gardeners' dinners have been held since that of 1866 at St. Martin's Hall, Long Acre, at which Lord Henry G. Lennox, M.P., presided; viz., one at Leicester, in 1868 or 1869, at which, I think, the Mayor of Leicester presided or the present Dean of Rochester. This was in connection with the Royal Horticultural Society's Provincial Show; another a little later at Nottingham, and on a similar occasion, when Mr. Alderman Manning took the chair; a third was held at the Lower Grounds, Aston, Birmingham, on the occasion of a large flower show, at which Mr. Joseph Chamberlain, then Mayor of Birmingham, and not then an M.P., filled the chair. This dinner was largely attended, and it goes without saying, the chairman was a great success. The fourth was held at South Kensington some years ago in connection with one of the large flower shows of the R.H.S. in the gardens; on this occasion the late Mr. William Thomson, of Clovenfords, presided. It is, therefore, not correct to state, as your reporter did, that no such dinner has been held since 1866. [We meant in magnitude and splendour.—Ed.] I acted as the secretary to the Dinner Committee in 1866, and I attended all the dinners to which I have referred.

A gardeners' dinner on the evening of a show day is always a risky affair. Exhibitors and judges are wearied over the day's exertions, and many soon become impatient of talk. The King's Hall is, as I know from experience, a trying room to speak in; it is difficult to send the voice into all its parts. On the 29th, the R.H.S. was made a little too prominent, and we could well have spared the superfluities from its trumpeters. By the time the toasts, more particularly those relating to gardeners, were reached, the patience and sense of the countrymen had risen in rebellion against the incessant preaching of enthusiastic speakers. The gardeners would tolerate none of their kind as orators. I am free to admit the disturbing element was on the fringe of one side of the hall, and it was strenuous enough to dominate over the large majority who were disposed to listen. There were too many toasts and far too many speakers. I had ill placement in following the encore of a rollicking song, which added to the

difficulty of gaining a hearing. A little more forbearance would have finished the programme in good time. Nevertheless, the occasion was a memorable one. Everyone appeared good humoured: even the discomfited speakers knew there was no ill feeling on the part of the tired, but assertive audience.—R. DEAN.

Lessons from the Chiswick Show.

A great combined exhibition of fruit and vegetables like that recently held in the historic gardens at Chiswick cannot fail to teach lessons which will have a lasting effect on the community of gardeners at large, and one of them, which does not appear to have dawned on the authorities before, is the practicability of holding a vegetable show in conjunction with one of fruit.

I say practicability, but the word should be qualified, and I am reminded of that absolute necessity which is referred to in the opening remarks of the show report (page 312), namely, money. An autumn show like the one under notice cannot be expected to be a paying concern, because gate money is not a big item, and though the society is reputedly in a prosperous condition it has the expenses of the new hall and the prospective expenses of the new garden hanging over it, so that increased revenues are invested, so to speak, in the business.

Money is the great motive power which turns exhibition machinery as it does most other things. Unless it is forthcoming, what hope can there be of a continuation of shows such as that recently held? It is the business of the Royal Horticultural Society to know what funds it will be able to spare for future shows, and how the subscriptions came in on this occasion I know not, but I simply mention the point for the benefit of those who talk glibly of what should be done next year without apparently taking the financial part of the business into consideration. Can the R.H.S. afford to run big shows at a financial loss? It appears to be part of the programme of the sister society, the Royal Agricultural, to do this, and yet they keep running; but how the R.H.S. stands in this respect is, of course, another matter. It is only fair that the Fellows should expect something for their money, and I take it that shows are included in the something, but how many, and of what proportions they should be is a point belonging entirely to the question of finance. [According to the Rev. W. Wilks, Secretary to the Society, the Fellows already receive a tenfold return for their guinea subscription.—Ed.]

As a rule, vegetables do not occupy a leading position at large shows. It is true they are represented at most of them, but there seems to be a general impression that they do not attract in the same way as fruit and flowers. Let us hope that the lesson taught at the last of Chiswick's many shows will abolish that idea for ever. There was grand fruit in plenty at the show in question, but instead of monopolising the interest it was equally divided, or perhaps it leaned on the side of the vegetables.

The latter division attracted unqualified attention, and I do not see how anyone could observe the splendid displays set up by Messrs. Beckett, Gibson, and Bowerman amongst the amateurs, and Messrs. Dobbie, Richard Smith and Co., R. Veitch and Son, Cheal, Bunyard, Cannell, and others amongst the trade growers, without admitting that they alone were worth going a long way to see.

Size was not aimed at, and coarseness was avoided, which was another useful lesson to those who still seem to hold the impression that a vegetable must be a giant in order to come up to exhibition standard. There were giants, of course, especially amongst the Onions; but these are an exception, and while it is generally admitted that size is no drawback to the quality of an Onion, provided the bulb is well grown and harvested, Onion growing has a peculiar fascination for those who make vegetables a speciality, and they could hardly help going in for monsters if they wished to.

I plead guilty myself to a little weakness for Potatoes, and spent considerable time over the magnificent display set up by Dobbie and Co. Nothing would have pleased me better than to have seen the faces and have heard the remarks of a few scores of cottage garden Potato growers, whom I know, if they could have been present. The Rothsay tubers taught a lesson, too, not only in the way Potatoes may be grown, but also in the art of presenting them for show. There were varieties both old and new, all free from blemish, and in the pink of condition, which went to prove that in some quarters at least Potato growing is reduced to a fine art. Another notable collection from the North, was the dozen varieties from Ormskirk which won the first prize for Lord Lathom's gardener, Mr. B. Ashton.

Few people who visited the show needed any lesson about the scarcity of outdoor fruits this year, but they got one all the same, and those who are used to seeing the grand displays at the Crystal Palace in the past probably voted the fruit to be small in quantity, small in size, and not overburdened with colour and finish. Here and there one observed notable exceptions, but signs of the general failure of fruit crop were painfully apparent

* See “Pre Victorian Days” in issue of April 19th, 1900.

at Chiswick. Under the circumstances, it could hardly be otherwise, and I was somewhat surprised to see this part of the show so good as it was.

The orchard house fruit, however, made up for any deficiencies in the outdoor section, and was superb. It mostly came from Messrs. Bunyard and Co., Maidstone, but it had a lesson to teach to wealthy garden owners, namely, that if they would have fine fruit irrespective of season, the line is to erect orchard houses and adopt this style of culture. It has been proved without doubt that the finest Apples and Pears can be grown in pots under glass, and in these days of great wealth it is the finest and the best that are needed for the tables of the affluent. Considering these facts, and also the uncertainty of the British climate, as experienced this year, it will not be surprising if there is a great extension of orchard house fruit culture in the future, and such displays as that recently seen at Chiswick can hardly fail to give impetus to the movement.

There were notable absentees amongst the exhibitors in the gardeners' division. One missed the burly form and smiling face of the late Mr. McKenzie, of Linton Park, near Maidstone, as well as the fine Apples he invariably staged. But the angel of death has been busy since the last R.H.S. fruit show, and "old Mac," as his intimate friends called him, has been taken away. The redoubtable Mr. Woodward, too, was not in the fighting line, and one naturally concludes that the frost last spring upset his calculations, as it did that of many others. It seems, however, that a Kentish grower must always be the leading single dish man, and chief honours fell to Mr. Stowers, of Sittingbourne, who staged some really fine fruit for the season, and proved by illustration that a few places escaped from the rigours of wintry weather at blossoming time.

Why does the R.H.S. fruit show not bring out more talent among the private growers of fruit under glass? We have the recollections of the great fights at Shrewsbury and Edinburgh fresh in the mind, after which mighty London has to take a very low place. The prizes are too small, do I hear someone whisper? Ah! now we have it, and of course choice fruits are not carried about the country for nothing, and gardeners are not so wealthy that they can afford to exhibit purely for honour. Still, one can hardly understand only one exhibit appearing in the class for nine dishes of dessert fruits. Where were all the redoubtable growers of the Midlands?

Mr. Goodacre was there from Elvaston, staging a grand collection; but it was disappointing, to say the least of it, that he should have it all to himself. In the class for a collection of six dishes, too, there was only one competitor, and again in class 3, for a collection of Grapes in six varieties, the Elvaston champion was the only exhibitor who staged. Museat of Alexandria appeared to be the most popular Grape, and with this exception the competition was quite commonplace in the single variety classes.

This state of affairs needs some explanation, because the frost did not affect indoor fruit, if it ruined that outside. It is to be hoped that exhibitors have not got so used to seeing the name of Goodacre on first prize cards that they do not care to compete with him, but evidently there is something wrong.

The lessons were not taught alone by the show itself, as there were useful hints to be picked up from the different papers read at the conference, which was attended by a fairly large muster, and the final one was that which illustrated the good fellowship and freemasonry of British gardeners. It was given in the King's Hall at the Holborn Restaurant, and the occasion was the long-talked-about gardeners' dinner, and next to a good show there is nothing that the average gardener enjoys more than a good dinner. I believe they got both.—G. H. H.

Potato, Northern Star.

Having read so much just recently of the fabulous prices secured for this Potato, I am naturally interested, as doubtless many other readers of your popular journal are, and wish to know more about it. What is the history of its origin? One would also like to know whether the accounts of its heavy cropping and disease-resisting qualities are reliable. If all one reads of its behaviour in the present and last seasons (1903 and 1902, admittedly such bad Potato years) is correct, then "Northern Star" should indeed prove a real acquisition, and I venture to think we shall all offer our heartfelt thanks to the raiser for giving us a "spud" that will yield a good crop without the endless trouble of spraying, re-spraying, and spraying again.

Will someone who knows be kind enough to give me a little information? Also if the still more recently introduced "King Edward VII." and "Evergoods" are improvements upon "Northern Star"? One naturally supposes that such enormous croppers require to be planted at much greater distance apart than is customary with ordinary varieties.

What has our old friend, Robert Fenn, to say on the subject? —WILMOT H. YATES, Rotherfield Park, Alton, Hants.

The variety was raised by Mr. Findlay, of Markinch, Fife-shire, N.B. The tubers are roundish, smooth skinned, and have both a whitish skin and white flesh. The accounts of its heavy cropping and disease-resisting merits seem to be true so far. The continual rapid propagation of it from both "sets" and cuttings, cannot, we think, do the plant justice, and the consequences may



Spiraea Thunbergi. (See page 327.)

be apparent in a year or two. Thirty inches should be allowed between each set. It has been stated that seedling varieties of Potatoes are more or less disease-resisting during the first fifteen years of their history. We trust our own remarks will be supplemented by those from readers.—ED.

Annie Elizabeth Apple.

A tree of this variety was planted in an orchard here about twenty-seven years since. The yield for the last ten years would average seven bushels a year. The Apple crop this year is considered nearly a failure, but I have a fine crop of this variety. Through the high winds, two and one-half bushels have been blown down, and I now estimate the quantity on the tree at seven bushels. It is one of the very best cooking Apples grown: a good cropper, with fine fruit, very few small ones, and is of beautiful appearance if kept for a time. It also keeps well into the spring. I have no trouble to sell them at what I consider a good price.—NORTH HANTS.



Pear, Marie Benoist.

An excellent dessert Pear, ripe during January and February. Our figure represents a medium-sized fruit, but it attains a very large size at times. The flesh is white, juicy, sweet, and melting, slightly perfumed. The tree grows well and bears freely.

Mr. Chamberlain's New Garden.

During the recess Mr. Chamberlain has been busily engaged in planning some new features to his garden at Highbury, and although the planting will not be completed for a considerable time, the various beds have been cut out, and some idea can be gained of what the addition will be like when it is finished.

As is the case with all his ornamental gardens, the late Colonial Secretary is his own designer, and carrying the whole idea in his mind's eye he disdains to use a plan, but, apportioning so much time every day to the work, he is at the garden giving instructions and directing the operations.

For the purpose of the construction of this new garden a piece of ground about an acre and a half in extent has been taken from the park. After planning the beds so that no other garden should be shut out of sight from the main drive, the work was commenced with the introduction of a patch of Bamboos in something like two dozen varieties.

Then a certain portion has already been planted with all varieties of Roses, such as Bourbon, Chinese, and Polyantha, in variety, Hybrid Perpetuals, Hybrid Teas, Damask, Provence, the Old Moss, the Crimson Rambler, and varieties of pillar Roses, whilst alongside there is a long ridge of Rosa rugosa, pink and white, and clusters of Penzance Briars.

All the groundwork is of natural grass. There will be a network of beds varying in size from very small to 50ft by 10ft in every conceivable shape. Commencing near the lodge there is a winding walk which will command a view of every detail of the garden. The garden will be planted with flowering shrubs and trees, ornamental foliage in all shades, hardy perennials in masses, and annuals also in masses.

The new garden is really a continuation of the rock Alpine and Italian gardens, all of which are, by the way, masses of flower and looking bright and gay despite the dull sun. Adjoining these gardens, and before the new one is reached, is a Dutch garden, which is surrounded by a Holly hedge. One of the sections

of this plot is confined to Narcissi, all choice varieties. The second is for bulbs, and the other section is devoted to the cultivating of all the best and choicest species of Iris. The paths are of a terra-cotta pattern of red brick substance, specially selected. Its appearance is very quaint, and, like all the other gardens, it has been laid out entirely from the master's designs by his head gardener Mr. Deacon, Mr. Chamberlain's practice being to never leave the ground until the plot is ready for planting. In concluding its notice the London "Evening News" observes that only two or three of the beds of the new large garden have as yet been planted, but it is easy to see that both in design and colour it will be a magnificent addition to the park.

The Elm.

Some writers think that the Elm (*Ulmus campestris*) is not a native of this country, but they have no reasonable grounds on which to found such an opinion. The name Elm is Anglo-Saxon, and appears to be derived from a root-word indicating height and strength. As corroborative evidence, justly cited by Dr. Hunter, are nearly forty places in England, mostly mentioned in Domesday Book, which have their names compounded with the name of Elm.

Whenever any plant has associated with the times of its leafing or flowering the seasons for performing garden operations, that is a certain indication that the plant was in England, as lawyers say, "before the memory of man runneth to the contrary." The Elm is one of those guide plants accepted by gardeners in the olden time, and they had this rhymed kalendarial warning:

When Elm leaves are as big as a shilling
Plant Kidney Beans if to plant 'em you're willi'g.
When Elm leaves are as big as a penny
You must plant Kidney Beans if you mean to have any.

Nor were our countrymen the earliest to deduct indications from those leaves, for Virgil wrote that

Each trembling leaf with some light vision teems.

Miller states that "Queen Elizabeth is said to have planted an Elm with her own hand at Chelsea. It went by her name, and I remember it a stately flourishing tree, except that the top was decayed. It stood at the upper end of Church Lane, and marked the boundary of the parish on the north side. It was felled on November 11, 1745, and sold for a guinea to Sir Hans Sloane, Bart., lord of the manor. It was 13ft in circumference at the bottom, and 110ft high." But Gilpin tells of one far larger that was felled in 1674 on Sir Walter Bagot's Staffordshire estate. Two men were five days in felling it. It was 120ft high, the stool 47ft in circumference; 160 naves for wheels, and 8,660ft of boards were cut from it, and the whole tree was computed to weigh ninety-seven tons.

No tree is better adapted for the formation of an avenue, and not one is more used for the purpose. The most striking example we remember is that at Strathfieldsaye, a mile in length. The fitness of Elms for avenues arises from their branches crossing at a pleasing angle, growing pendant in age, and far above the heads of the passers beneath. Gilpin truly observes that no tree is better adapted to receive grand masses of light, nor is its foliage, shadowing as it is, heavy in effect. Its leaves are small, commonly hang loosely, and the forms picturesque. It is the first tree that salutes the spring with its light and cheerful green, a tint contrasting agreeably with that of the Oak, the early leaf of which has usually an olive cast. In autumn also the yellow leaf of the Elm mixes as kindly with the orange of the Beech, the ochre of the Oak, and other hues of the fading wood.

It was of the common Elm that Hood sang.

The tall abounding Elm that grows
In hedgerows up and down,
In field and homestead, grove and park,
And in the peopled town;
With colonies of noisy rooks
That nestle in its crown.

These lines are faithfully descriptive of this Elm, for as a park, hedgerow, and homestead tree it is very familiar, and few trees are more imposing. It is also true that the rooks have a great partiality to the Elm, and it is of its twigs principally that they build their nests. It is not, however, a tree well adapted to the "peopled town." In the country it is majestic as the avenue noticed, and the grand trees at Windsor and other places attest; but in smoky towns Elms are seldom long-lived, and furthermore their peculiarity of suddenly parting with limbs in storm or in calm render them unsafe. It is a singular fact, and not clearly accounted for, that in calm, still, sultry days the huge branches are prone to fall with a crash without a note of warning. On that account it is not suitable for towns, nor yet for village greens where "men do congregate." The Plane is the tree of trees for towns, and for village greens the Chestnut is of free growth, and affords luxurious shade. Who can think of planting village trees without calling to mind the

rural warblings of Longfellow in the well-known song—nay, is it not a hymn?

Under the spreading Chestnut tree the village smithy stands.

Our advice is, therefore, that Elms be planted only in parks, hedgerows, or avenues in rural districts, and not in towns or villages.

That only applies to the subject of our illustration, for there are other varieties of the Elm singularly ornamental and perfectly safe. Drooping Elms are particularly effective as lawn trees. They are quick growers, and their outline is graceful, speedily forming natural bowers if a little care is taken to train their pendant branches; and the gold and silver variegated sorts afford a fine relief to the dense greenery pervading landscape masses.

U. campestris and its allies are raised by suckers and layers, but chiefly by seeds, which should be gathered in June as soon as ripe, and sowed in light mellow soil. The ornamental varieties are mostly grafted on stocks of *U. montana*. The trees of all the family may be successfully transplanted even after they have attained to a considerable size, their fibrous roots becoming speedily re-established in fresh soil.—J.

Societies.

Royal Horticultural, Chiswick.

The fruit and vegetable show which we very fully reported in our preceding issue, terminated successfully on Thursday evening of last week. We recorded the fact that rain fell on the afternoon of the first day, making pedestrianism very uncomfortable, but the two succeeding days were ideal and autumn-like. The attendance of visitors was meagre, and, we fear, very little business was transacted by the nurserymen and other business folks represented. The show was, however, admired by all, and afforded means of instruction and much of interest to all who saw. We append the names of prizewinners in the few classes not reported in our issue of the show week.

Special District County Prizes.

LINCOLN, NORTHAMPTON, WARWICK, LEICESTER, NOTTS, DERBY, STAFFS, SHROPSHIRE, AND CHESHIRE.—Apples (6 dishes): First, Mr. J. Lee, Higher Bebington, Cheshire; second, Mr. Knight, Stamford. Of Pears there were three collections, Mr. Divers leading, and Mr. Hy. Knott second.

WORCESTER, HEREFORD, MONMOUTH, GLAMORGAN, CARMARTHEN, AND PEMBROKE.—For Apples, Lord Biddulph's gardener (Mr. J. Dawes), from Ledbury, beat Mr. Jno. H. Wooton, Byford, Hereford, these being the only two. Mr. Dawes had the only dish of Pears.

SIX NORTHERN COUNTIES OF ENGLAND AND ISLE OF MAN.—Two collections. Apples: Mr. J. McIndoe first; Mr. H. Thellusson, Brodsworth Park, Doncaster, second. Pears: Mr. Thellusson led, and Mr. B. Ashton, of Ormskirk, was second.

SCOTLAND.—Apples, two collections: Mr. Day, of Galloway House, was first; Mr. Jno. Cairns, Coldsteem, second. The same order was followed for Pears.

OPEN TO GROWERS IN THE OTHER COUNTIES OF WALES.—Apples, three collections: First, Mr. A. Forder; second, Mr. R. A. Horspool. Pears: First, Mr. R. A. Horspool; second, Mr. Fox, Highmead, Llanybyther.

IRELAND.—Apples, four collections: First, Mr. H. F. Broad, Aghern, Conna, Co. Cork; second, Mr. J. Weston, gardener to Viscount Duncannon, Piltown. For Pears Mr. Broad led, and Mr. R. McKenna, of Tullamore, second.

Peaches, Plums, Cherries.—Division III, Classes 23 to 33.

Peaches, grown entirely out of doors. For three varieties, Mr. Masterson, gardener to the Earl of Camperdown, Weston House, Shipston-on-Stour, was first, showing the varieties Walburton, Princess of Wales, and Sea Eagle; but in the succeeding class for one variety the first prize was awarded to Mr. Vert, gardener to Lord Braybrooke, for Sea Eagle; the second to Mr. W. Mitchell, gardener to J. W. Fleming, Esq., Chilworth Manor, Romsey, for the same variety. The best dish of Nectarines was from Mr. Goodacre.

Only one exhibitor staged six dishes of Plums, Mr. J. Cornford, who was awarded the first prize. For a single dish of Gage Plums there were ten competitors showing Coe's Golden Drop. Mr. J. Vert was first; second, Mr. C. Crane. For any single dish of a dessert variety there was no exhibitor; but for a single dish of a cooking variety nine dishes of Monarch and one of Archduke were staged. Mr. Vert was again first; second, Mr. Carlisle, gardener to G. J. Gribble, Esq., Harlow Grange, Biggleswade. The Morello Cherry class brought four exhibits, the first prize going to Mr. Page, gardener to J. B. Fortescue, Esq., Dropmore; second, Mr. S. Haines, gardener to Hon. D. P. Bouverie, Coleshill House, Highworth.

Vegetables.—Division VIII, Open to Amateurs Only.

Six Globe Artichokes (three exhibits), Mr. Beckett first, Mr. Gentile second, third Mr. A. Basil, Woburn Park, Weybridge. There was no competition for climbing, or dwarf French Beans. Scarlet

Runners or White Runner Beans were abundant, and the quality was superior, five lots being shown. First, Mr. B. Ashton, with Sutton's Prizewinner; second, Mr. J. Banks, Castle Hill, Bletchingley, with Sutton's Best-of-All; Mr. G. Zock, Newcomes, Crediton, Devon, third. Red-top round Beetroot brought a good competition, and Mr. Gentile was a good first with Eclipse; second, Mr. Basil. Eleven lots were staged. For six red-top Beetroots, long, first, Mr. Cole, Althorp Park; second, J. Huntley, Esq., Cockburn Lodge, Hirsell, Coldstream; third, Mr. Forder, Ruthin Castle. For green-top Beetroots only one lot was staged.

Mr. J. Brown, Houston House, Renfrewshire, had nice heads of green curled Borecoles, Dobbie's Victoria, being first; Mr. J. Ireland, Kilburnie, Ayrshire, was second with the same variety.

Cauliflower or autumn Broccoli class, three heads, brought six lots. Mr. Cole was first with Autumn Giant; second, Mr. Beckett, with the same; and Mr. W. Waite, Butterknowe, Southfields, third. For three Coleworts or Cabbages there were three exhibits, Mr. Brown having splendid examples of the Imperial Winnigstadt; Mr. R. A. Horspool was second. For Red Cabbage, Mr. Beckett first with dwarf Red Dutch; and Mr. Brown second with Dobbie's Dwarf Red. For Drumhead Savoy, Mr. C. Duruz, Hotel Imperial, Hythe, was first. Carrots formed an interesting class of fine quality. Mr. R. A. Horspool's were splendid, the variety the stump-rooted Smith's Scarlet Defiance; Mr. B. H. Hill was second with excellent Veitch's Model; and Mrs. Dennison third with Early Nantes. For long-rooted Carrots Mr. B. H. Hill was first with Sutton's Intermediate; Mr. Brown was second with Dobbie's Intermediate; and Mr. J. Kennedy, Trinity Bay, Millport, was third with the same. There were four lots of red Celery staged. Mr. Beckett first with Standard Bearer; Mr. Brown second with Dobbie's Selected; and Mr. Fyfe, Lockinge Park, third with Standard Bearer.

For dwarf red Celery, Early Rose (Veitch), Mr. Beckett led; and two persons showed Giant White, Mr. Beckett again first, and Mr. R. A. Horspool second with Wright's Giant White. For white dwarf



Ulmus campestris, the Elm.

Mr. Beckett was again to the front with Early Gem. Mr. Fyfe was first with a brace of Cucumbers. There was only one exhibit of six bulbs of Kohl Rabi, and this came from the Guardians, Hornchurch Homes, Romford (gardener, Mr. A. Higgins). For Leeks there were four competitors. First, Mr. Beckett with Dobbie's Champion; Mr. Speirs second with the same; and Mr. Horspool third with New Model. Cabbage Lettuces were excellent. Rev. T. McMurdie was an easy first with Sutton's Supreme; Mr. R. A. Horspool was second with All-the-Year-Round; and Mr. A. H. Rickwood third. For Cos Lettuce Rev. T. McMurdie was first with Balloon; Mr. F. W. Herbert, Nutfield Court, Redhill, second with Veitch's Brown Cos.

Spinach was represented by one dish, and New Zealand (*Tetragonia expansa*) from F. M. Brown, Esq., Southfields, S.W. Tomatoes formed a notable feature. The first prize for four dishes of six fruits was taken by Mr. B. Ashton; second by Mr. B. H. Hill, Crediton, with Frogmore Selected as his best; and third by Mr. H. Forder, Ruthin Castle. Mr. C. Page, Dropmore, was first for two dishes with Winter Beauty and Perfection; second, Mr. Smith, the Convent Gardens, Roehampton, with Perfection and Frogmore Selected. Turnips formed an extensive class, there being seventeen exhibits. Rev. T. McMurdie was first with Model White Stone; second, Mr. R. A. Horspool; and third, Mr. B. H. Hill with Veitch's Red Globe. There were only two yellow-fleshed varieties. Of these last Mr. B. H. Hill had very fine bulbs of Sutton's Perfection, and Mr. Brown was second with Golden Ball. Mr. Beckett was first for a collection of named pot herbs. For any vegetable not in the scheduled classes, Rev. T. McMurdie staged very large white Spinach Beet; and Mr. Brown was second with the Chinese Artichoke, *Stachys tuberosa*.

Onions were remarkable for quality, size, and finish. Mr. E. Beckett first for six very beautiful examples of Ailsa Craig; Mr. Brown, The Worthys, Kingsworthy, Winchester, was second; and Mr. W. Allen, Gunton Park, Norwich, third. Mr. Bowerman had the best bulbs in class 135, with Ailsa Craig; Mr. W. Fyfe was second, and Mr. Beckett third with white Spanish. Of red-skinned Onions only one lot was staged from Mr. Beckett. For six long Parsnips, Mr. Brown was first with Dobbie's Selected; and J. G. Marsh, Esq., Tamworth Road, Hartford, second with shorter roots. In the round, short-rooted class there was no competition. For the best three dishes of Peas there was some splendid produce shown by Mr. B. Ashton, Ormskirk, who had Queen of Marrowfats, Duke of Albany, and Alderman; Mr. R. A. Horspool was second with St. Duthue and Gladstone. The class for six dishes of Potatoes brought one exhibitor, Mr. Forder, who showed General Buller, Windsor Castle, The Colonel, Sutton's Seedling, and Satisfaction. For six dishes, six tubers each, of kidney Potatoes, H. Padwick, Esq., Manor House, Horsham, was first with British Queen; Mr. Brown close second with The Factor, Herd Laddie, and The Crofter. For three dishes of rounds there was only one entry. These varieties were excellent, from Mr. R. Milner, gardener to Miss Talbot, Margam Park, Port Talbot. For kidney-shaped varieties there was more competition, Mr. Brown being a good first, having a grand dish of Sutton's Ideal; Mr. George Crabbe, Park House, Addlestone, being second, having handsome tubers of Supreme and Reliance.

Non-Competitive Exhibits.

Messrs. John K. King and Sons, the King's seedsmen, Coggeshall and Reading, were awarded a Silver Banksian Medal for a fine collection of vegetables, including some thirty varieties of Cabbages.

Messrs. Cannell also staged a display of vegetables, in which Onions were particularly good. Messrs. Sutton and Sons had a collection of Potatoes, and a new variety named Discovery was shown. So much as 38lb had been taken from one root. Potatoes also came from Dobbie and Co., Rothsay—a truly wonderful collection, unexcelled in this country. Besides many of their own novelties, the new Northern Star was seen. Messrs. J. Veitch and Sons, Ltd., and Harrison and Sons, Leicester, also displayed exhibits of vegetables.

Those staging fruit or fruit trees were Messrs. Hugh Low and Co.; Cutbush and Son, Highgate; Paul and Son, Cheshunt; Geo. Mount, Canterbury; J. B. Colwill, Sidmouth; Spooner and Sons, Hounslow; J. Cheal and Sons; Horne and Son (dish of Charles Ross Apples); and Geo. Kelf (a new Melon). Mr. J. Ambrose, Cheshunt, Herts, sent a new black Grape named Melton Constable.

Medal Awards for Exhibits.

MISCELLANEOUS.

Gold Medal to H.M. the King, Windsor Castle (gardener, Mr. Mackellar), for Grapes and Pineapples; Messrs. Jas. Veitch and Sons, Ltd., Chelsea, for a collection of vegetables; Messrs. T. Rivers and Son, Sawbridgeworth, for fruit trees in pots; Messrs. Dobbie and Co., Rothsay, N.B., for (a) collection of Potatoes, (b) collection of vegetables.

Silver-gilt Knightian Medal to Messrs. Sutton and Sons, Reading, for Potatoes; Messrs. H. Cannell and Sons, Swanley, for a collection of vegetables; to the Horticultural College, Swanley, for a collection of vegetables; Agent General for British Columbia, Finsbury Circus, for Canadian preserved fruit; Marquis of Exeter, Stamford (gardener, Mr. Metcalfe), for Melons.

Silver Banksian Medal to Mr. R. W. Green, Wisbech, for Potatoes; Messrs. J. King and Sons, Coggeshall, for Cabbages; Messrs. Harrison and Sons, Leicester, for a collection of vegetables; Mrs. A. Bramwell, Kingsworthy, Hants, for Onions.

HORTICULTURAL SUNDRIES.

Silver Flora Medal to Messrs. Jos. Bentley, Ltd., Barrow-on-Humber, for horticultural sundries.

Silver Banksian to Messrs. W. Wood and Son, Ltd., Wood Green, N., for horticultural sundries; Messrs. Corry and Co., Ltd., 13, Finsbury Street, E.C., for horticultural sundries; Messrs. D. Dowell and Son, Hammersmith, for horticultural pottery; Messrs. Pulham and Son, 71, Newman Street, W., Pulhamite stone vases; Messrs. Champion and Co., City Road, E.C., tubs for shrubs; Mr. John Pinches, Camberwell, S.E., for Acme labels.

Bronze Banksian Medal to the Lubrose Paint Co., Moor-gate Station Chambers, E.C., for horticultural paints; Messrs. Valls and Co., Coleman Street, E.C., for Beetlecut; Mr. Jas. George, Putney, S.W., for horticultural sundries; Mr. J. Cannon, Ealing, W., for fruit trees; Mr. H. M. Hamilton, Finchley, N. for horticultural sundries.

Commended to Messrs. Day and Thelland, St. Heliers, Jersey, for new packing case for fruit.

MONSTER VEGETABLE MARROWS.—At the Midhurst Flower Show, the Workhouse Master, Mr. A. H. Field, exhibited a Vegetable Marrow weighing 38½lb, and having a girth measurement of 45½in. A second Marrow, of smaller dimensions, turned the scale at 35½lb.

TREE WITHIN A TREE.—At Moulton, South Lincolnshire, there is a Willow tree, which in consequence of having been beheaded, and having reached an old age, has become hollow and rotten. From a seed which had dropped into the hollow, a healthy Sycamore has grown to the height of 10ft.

THE PEAR-APPLE NOT A SUCCESS.—The possibility of Pear-Apple was suggested to a Worcestershire gardener by finding such a freak on one of his Apple trees. He successfully produced it after several attempts, but it is likely to be valuable only as a curiosity, for there is little that is inviting either in its appearance or flavour.

PECULIAR HYBRIDS.—It is possible to produce the strangest crosses. Blackberries, for instance, have been crossed with Strawberries; but though the resulting seed produced plants, these plants were sickly and spindly, and utterly refused to bloom, much less bear fruit. Perhaps the most peculiar attempt at crossing fruits was that between the Black Currant and the Gooseberry, but in spite of every effort it failed.

THE MENDELIAN THEORY UPHOLD.—Miss Edith Saunders, at the recent meeting of the British Association, spoke on the results of some cross-breeding experiments with plants. The results, she explained, were in many cases in perfect accordance with the Mendelian theory, and those which at first sight appeared not to be so were on examination found to be reconcilable with the theory. Miss Saunders exhibited diagrams dealing with the Stock and the Salvia.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
1903. September and October.										
Sunday ...27	S.E.	deg. 57.2	deg. 56.8	deg. 66.4	deg. 49.3	Ins. 0.21	deg. 59.0	deg. 59.0	deg. 57.4	deg. 42.7
Monday ...28	S.E.	60.7	59.3	69.2	55.5	0.17	59.0	59.0	57.6	47.9
Tuesday ...29	S.E.	64.9	63.0	67.0	59.8	0.39	60.3	59.0	57.6	53.7
Wed'sday 30	S.W.	62.7	59.2	69.2	53.0	—	60.3	59.3	57.7	44.8
Thursday 1	S.S.W.	58.7	58.2	65.6	47.9	0.06	59.0	59.3	57.7	42.0
Friday ... 2	S.W.	57.7	54.2	64.4	50.8	0.02	58.8	59.0	57.7	45.2
Saturday 3	S.W.	61.4	60.0	66.0	57.5	0.20	59.3	59.0	57.7	52.9
MEANS ...		60.5	58.7	66.8	53.4	Total. 1.05	59.4	59.1	57.6	47.0

The weather has been for the most part of the week cloudy and dull, with a considerable quantity of wind at times. Rain fell on six days.



Fruit Forcing.

CUCUMBERS.—The latest plants which are to afford fruit about the new year and onwards should be placed out on hillocks or ridges, training with a single stem to the trellis, up which they may be allowed to extend two-thirds, when the lead may be pinched. Those not having the convenience of a Cucumber house may secure fair supplies of winter fruit by growing the plants in pots or boxes, and training the growths over the paths in stoves, fruiting Pine stoves, or other well heated structures. Plants in bearing should not be over-cropped, or the fruit allowed to remain longer than it is fit to cut, removing all deformed fruit in a young state. Maintain a night temperature of 70deg, 5deg less in the morning, 75deg by day, up to 85deg or 90deg with sun, admitting a little air at the top of the house at every favourable opportunity. The evaporation troughs should be charged with liquid manure, and the floor damped about 8 a.m. and 4 p.m., dispensing with the syringe over the plants. Reduce the supply of water at the roots, but not so much as to cause flagging. A little artificially compounded fertiliser sprinkled on the beds occasionally will benefit the plants through the waterings washing the elements into the soil. Keep the foliage thin and the glass clean, so as to secure thoroughly solidified growth.

LATE GRAPES.—Where the Vines were started in good time, say March, and aided in the spring by fire heat, as well as during the summer, the Grapes will be thoroughly ripe, in which state they can only be expected to keep satisfactorily, and the wood thoroughly matured; all laterals or sprays may be removed down to the main buds, ventilating freely on all favourable occasions. Fire heat will only be necessary to prevent the temperature falling below 50deg. Muscat of Alexandria and Canon Hall, the finest of all Grapes, however, mature better in a temperature of 55deg. To prevent dust falling on the berries raking or sweeping must not be practised. Mats or clean straw laid over the inside borders will to some extent prevent evaporation. Outside borders need not be covered where the soil acts like a sieve, but where composed of somewhat moisture holding material a covering against heavy rains is advantageous. Glass lights are best, wooden shutters good, and tarpaulin over dry bracken or straw answers well. A thick thatch of straw or bracken answers well. Where the Grapes are not yet ripe the temperature must not be less than 70deg to 75deg by day, and 65deg at night, falling 5deg through the night, allowing an advance to 80deg or 85deg from sun heat, continuing this until the Grapes are ripe, at least until the wood is brown and hard, for it is almost hopeless to expect good finish in Grapes that are not so by this time.

MELONS.—The end of the Melon season, as regards those grown in frames and pits heated with fermenting materials, is approaching, though fairly good fruit may be had up to November, especially of kinds that will keep for some time. Any fruits approaching ripeness should be cut with a good portion of stem, and placed in a house with a gentle warmth, where they will ripen, and be welcome additions to the dessert. From houses a supply of fruit will be kept up some time longer, the latest fruits only swelling now. Sufficient moisture will be secured to this crop by damping in the morning and again early in the afternoon, affording water to the roots moderately—a supply once a week will, in most cases, be sufficient. All superfluous laterals should be cut out, so as to afford the principal foliage the benefit of the autumn sun. Plants with fruit approaching ripeness should be kept dry, and a brisk heat maintained, with free ventilation, the temperature being kept at 65deg at night, 70deg to 75deg by day, rising to 85deg or 90deg from sun heat, affording a little air at the upper part of the roof whenever the weather is favourable.

LATE HOUSES.—October Peaches and Nectarines are quite as much valued as those of May, as they are fine in appearance, and when properly supplied with moisture and nutriment during the growing season, juicy and well flavoured. Sea Eagle is one of the best late Peaches, large, showy, good flavoured, with a juicy flesh, free of the stringiness and mealiness too prevalent in some late Peaches. Thomas Rivers also is a large, round, free-stone Peach, with a bright red cheek, firm flesh, juicy, and full of flavour. Lady Palmerston is also good in flavour, the fruit being large, greenish-yellow marbled with crimson, flesh pale yellow and melting. Victoria Nectarine attains to a large size, has a rich, sugary juice, and fine Stanwick flavour. As the wood in many late houses, especially unheated, is not too ripe, owing

to the dull and wet season, the house may be kept almost closed by day, so as to secure a good heat, admitting sufficient air to secure a circulation, continuing the ventilation at night. Any trees that have too gross wood should have a trench taken out as deeply as the roots, and about one-third the distance from the stem the trees cover of trellis, and left open for a fortnight, then filled in again firmly.

STRAWBERRIES IN POTS.—Where autumn and winter fruiting plants are grown they must, without further delay, be placed under glass and on shelves, so that they may enjoy a free circulation of air, ventilating so as to expel damp, as the fertilisation of the flowers is not satisfactorily effected in a damp atmosphere. Plants swelling and ripening their fruit in frames should have moderate ventilation, and though Strawberries will ripen at this season in cold frames, they swell better and the fruit is improved in a house where there is moderate moisture, and a temperature of 50deg to 55deg as a minimum, 70deg to 75deg as a maximum, by artificial means, in which they have air on all favourable occasions.

PLANTS FOR NEXT YEAR'S FRUITING are late, the crowns are not well matured nor so strong as desirable. Those intended for early forcing should be placed on a base impervious to worms in frames or cold pits, exposing them fully to every gleam of sun, employing the lights only to ward off heavy rains and at night when frost prevails. Keep the remainder of the plants in a sunny position, as they will require every ray of light and sun's warmth to enable them to mature the crowns properly.—ST. ALBANS.

Kitchen Garden.

PLANTING CABBAGES.—The ground for the spring crop of Cabbage should be well prepared, but not too liberally manured. Though strong and vigorous growth is desirable, it should be dwarf and stocky in character, not large and succulent. This is a good time to place out the main crop of plants. Some may have been planted earlier, but it is not wise to rely altogether upon them, as they are likely to grow too large. Those pricked out in nursery beds are now of fair size and fit for final planting. Raise them with small balls of earth attached and plant in rows 2ft apart, the plants being 15in to 18in asunder. Some like to plant thickly at this season, say a foot apart, taking out every other one, either for early use or forming a fresh plantation in spring. This is a good plan if there is much demand for young Cabbage previous to its forming hearts. It may also prove very useful should there be a scarcity of green-stuff in early spring. Therefore, let a portion of the crop be planted thickly. All plants left in the seed beds are worth retaining, so thin out crowded and attenuated specimens, also weeds, the plants then remaining for probable use in spring. Dustings of soot may be applied, and frequent hoeings given.

OUTDOOR TOMATOES.—Fruits hanging on plants outdoors will scarcely do any further good towards ripening while remaining, so all should be gathered, green fruit as well as coloured. Those that have begun to colour will finish in a dry, warm place, while the small and green samples may be utilised for making into jam, so none need be wasted. A severe night's frost at this period will most likely destroy them, hence the importance of at once gathering them.

LIFTING CARROTS.—Roots having made full growth should be lifted and stored. If carefully loosened with a fork they may readily be drawn without injury. The leaves may be cut off several inches from the crown, and the roots exposed to dry air and sun, if possible. Failing this, dry them under cover. They can then be placed in a heap in a dry corner in a shed, covering with bags or straw. As a further protection, some may be preserved between layers of dry ashes or sand.

ENDIVE.—Seedlings should be planted out on a dry border. Full-grown plants may be kept some time in fair condition if damp does not attack them. If portable frames can be arranged over them where they stand, this will serve to keep them dry some time, or they might be lifted with balls of soil and placed in the frames. Blanch in the usual way, covering with pots or slates when the hearts are dry.

LETTUCES.—Good plants of Lettuce are invaluable at this time, and for longer if they can be preserved. Similar treatment as accorded for preserving full grown plants of Endive may be adopted for Lettuce. Damp alone is a great enemy in hastening their decay, but sharp frosts occurring when the plants are very wet will hasten their destruction. A specially tender place is the stem below the leaves. The plants must not be confined too closely in the frames, but air admitted freely. Winter Lettuce planted out in borders for standing the winter must be kept clear of weeds. Hoe lightly in dry weather.

CELERY.—The most favourable times for finally earthing rows of fully-grown Celery should be seized when the soil works dry and the weather is fine. The plants should have their leaf-stalks drawn closely together, and the soil, broken up finely,

packed carefully round. In finishing make the sides steep so as to well drain the moisture away.

LEEKs.—Fully grown Leeks may be further blanched by earthing the stems a little higher. Accelerate the growth of smaller plants by applying liquid manure. The will develop in size throughout the winter.—**EAST KENT.**



* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.

NORTHERN STAR POTATO (W. H. G.).—We have no particulars of this Potato beyond those which we have given elsewhere. The price realised at auction implies a small quantity, working out at £850 per ton, or about 7s. 7d. per pound. This indicates a Potato craze equal to that obtaining for allotments or small holdings in the Spalding district of Lincolnshire, where the land let recently at auction for £5 7s. per acre. The "Gardeners' Chronicle" last week furnishes a history of the Potato.

TECOMA SMITHI TREATMENT (Foreman).—It is a greenhouse plant, and succeeds best in well-drained, loamy soil, and requires very liberal supplies of water during summer, but not needless and excessive supplies so as to make the soil sodden and sour. We advise that it should be kept moderately dry at the roots during the winter. The plant grows vigorously under ordinary treatment; but, in order to insure free flowering, the wood must be thoroughly ripened by being exposed to sunlight and air during the period of growth. It, like the other Tecomas, succeeds best planted out in a well-drained border, and not given too much root-room, otherwise it grows rampantly, and produces flowers somewhat sparsely. This, however, depends on keeping the growths well exposed to light and air during the summer, and keeping cooler and drier in autumn and winter. A figure was given in our pages on May 2, 1901. It is grown in annual batches from cuttings, as a single-stemmed pot subject, at Kew.

WINTER DRESSING FOR VINES (H. C. C.).—1. The dressing advised on page 277, and applied at the rate of 4oz to 8oz per square yard, should not be repeated unless 4oz of the mixture was applied per square yard, then you may apply another dressing of 4oz per square yard as soon as convenient, or not later than the pruning of the Vines. You allude in your letter to dissolved bones and kainit, omitting the term refined, as employed by us to distinguish the difference between double sulphate of potash and magnesia and ordinary kainit, as the latter is a very inferior article, containing much less sulphate of potash and magnesia, viz., 23.60 per cent. sulphate of potash and 14.50 sulphate of magnesia, while the chlorine is very much higher, viz., chloride of magnesia 12.40, and chloride of sodium (common salt) 34.60. This article (ordinary kainit) we do not and did not advise for Vines or fruit trees generally, partly on account of its contained chlorine and sodium, and particularly because it does not contain half the amount of sulphate of potash and magnesia as the double sulphate of potash and magnesia (refined kainit), as given on page 277. Kainit or crude potash salts have special value for Mangold Wurtzel and Cabbages, also for mixing with new or raw turf in conjunction with basic cinder phosphate for forming compost for Vine borders, but for fertilising purposes the more concentrated forms of potash and phosphates are imperatively necessary to insure speedy and certain results, such as sulphate and muriate of potash and dissolved bones or superphosphate. On account of the magnesia in the double sulphate of potash and magnesia (refined kainit) we advise it for Vines in preference to muriate of potash. 2. The manure quoted on page 277 would answer for Peach trees, though for these and fruit trees and bushes we advise a mixture of nitrate of soda, $1\frac{1}{2}$ part; dissolved bone-meal, 6 parts; high grade mineral superphosphate, $3\frac{1}{2}$ parts; muriate of potash, 3 parts; kainit, 4 parts; wood ashes (unleached), 2 parts, mixed, and applied in autumn, or not later than February, at the rate of 5cwt to 10cwt per acre, $3\frac{1}{2}$ lb to 7lb per rod, 2oz to 4oz per square yard. This manure contains 1.9 per

cent. of nitrogen, 8 per cent. phosphoric acid, and 11 per cent. of potash. It is well adapted for use on Gooseberries, Currants, and all fruit-bearing bushes and trees; also for garden vegetables in connection with stable and farmyard manure.

DEFINITION OF DOMESTIC SERVANT (A. C. D.).—The words "Domestic Servant" apply to all persons employed in a domestic capacity in connection with an establishment where servants are kept, whether indoor or outdoor, male or female, hence stablemen and gardeners, head or under, are domestic servants, the question of living on the place not applying to those regularly employed. Hence you, as an under gardener, are a domestic servant. Of course, for excise purposes only, males are liable to duty, and this does not apply to helpers in stables or labourers in gardens living off the place.

ASH TENNIS COURT (Alpha).—There are two ways in which the ashes can be made to bind together. 1. Asphalt. (a) Take eighteen parts of mineral pitch and eighteen parts of resin, put them into an iron pot and place it over a fire, keep boiling for a short time, then add to it sixty parts of coarse sand, mix well together, and lay it on the path to the thickness of an inch, then sift a little fine gravel over it, and beat it in before the asphalt sets. (b) Take two parts of very dry lime rubbish, and one part coal ashes, also very dry, and both sifted fine. On a dry day mix them, and leave a hole in the middle of the heap, into which pour boiling hot coal tar, mix, and when as stiff as mortar put on three inches thick—the ground should be perfectly dry and beaten smooth—sprinkle over it coarse sand. When cold pass a light roller over it. In a few days it will be solid and waterproof. 2. Cement. The ground being made level, and three or four inches of rough material, but broken small, on top, put in, and well rammed, place on about $1\frac{1}{2}$ in thickness of one part by measure of Portland cement and two of coarse sand and fine gravel mixed to a thin consistency with water. Before this coating has become thoroughly set, lay upon it a coating of Portland cement, mixed with an equal part of fine sand and $\frac{1}{2}$ in thick in a mortar-like state, smoothing over. Or take equal parts of gravel, well screened, and clear road or pit sand. With five parts of the mixture of gravel and sand mix one part of Portland cement. Mix with water, and apply 2in thick. You may form a liquid of Portland cement and run it on the ashes. This would certainly cause the surface to bind, and being made smooth and even answer for a time. The better plan would be to add one part of Portland cement to five parts of ashes, and place on 3in thick. The ashes may also be treated with boiling coal tar, putting down 3in thick, the ashes being thoroughly dry. The smell of tar and of pitch is sometimes objected to, hence lawn tennis ground is usually cemented. So far as we are aware there is no better material for making the lines than liquid whitewash. Sometimes wood on edge is laid on the cement to indicate the lines, and these painted white, or kept white by timely attention by the chalk-marker.

PLANT FOR PLANTING AGAINST A BARBED WIRE FENCE TO AFFORD A PAYING CROP (R. S.).—As the position is exposed, we fear Raspberries would not answer, as they are liable to be much battered by strong winds; indeed, Raspberries naturally are coppice plants, where they grow in patches, and have a certain amount of shelter without overhanging shade. Unless very bleak the Raspberries might succeed, the fruiting canes being secured to the wires of the fence, and a strong-growing variety selected. Norwich Wonder, scarlet, fruit large and well flavoured, robust grower, is largely grown in field plantations, and is one of the hardiest, though perhaps excelled by Superlative, a robust grower and very heavy cropper, the canes, being stout and reaching to a height of 6ft or more, support themselves. The fruit is good either for dessert or kitchen purposes, being large, conical, and handsome, and the plant bears drought well, and the berry is not liable to mould or rot in wet weather. If you have command of both sides of the fence, this variety we advise, contingent on the position not being very bleak. Similar remark applies to Blackberries, the fruit being often small and battered by wind in exposed places. Unless very bleak, they do well. The Parsley-leaved, a strong grower and large fruited kind, is the best, and probably no plant gives such a large quantity of fruit. It is well adapted for a fence, being of climbing habit. By Hybrid Raspberry-Blackberry, we assume you mean the Loganberry, which bears very freely, treated like a Raspberry. The fruit is borne in clusters, and is long and dark in colour, being valuable for cooking or jam, and when black-ripe useful for dessert. Of its value for exposed places we have no experience. For a very exposed position no tree equals the Farleigh or Crittenden Damson, and treated similarly to a rough Thorn or overgrown hedge is an excellent and profitable barrier, as it bears enormously, is fine for preserving, and a very lucrative market sort. It should, however, only be planted where the owner or occupier claims both sides of the fence, and the position is not near a road or footpaths, for near these it is only growing for trouble and others' benefit, roadside planting being very delusive.

GRAPE, MUSCAT OF AVIGNON (J. C.).—We do not know a variety of this name.

BOOK ON APPLE CULTURE (F. S. A.).—You will find Mr. H. H. Thomas's "Book of the Apple" (John Lane, London, 2s. 6d.) a very helpful treatise.

DESSERT PEARS FOR WALL FACING EAST IN ORDER OF RIPENING AND STEWING PEARS (New Reader).—*Clapp's Favourite, *Triomphe de Vienne, *Beurré Superfin, *Louise Bonne of Jersey, *Marie Louise, *Durondeau, Beurré Diel, Van Mons Léon Leclerc, Marechal de Cour, Emile d'Heyst, *Doyenne du Comice, Thompson, Passe Colmar, *Gloire Morceau, *Beurré d'Anjou, *Winter Nelis, *Josephine de Malines, and *Bergamot Esperen. The dozen have an asterisk prefixed. Yes, there are twenty and many more really good dessert Pears, Comto de Lamy being the highest in quality of all Pears, and a sure cropper even in cold districts; and what Pear surpasses in quality the English raised Pear Knight's Monarch? Stewing Pears: Vicar of Winkfield, Bellissime d'Hiver, Catillac, and Uvedale's St. Germain. The trees for training obliquely, and planting 2ft apart, are best yearlings, dwarfs or maidens, and cost about 1s. each, or in case of double grafting, 1s. 6d. each. They should be on Quince or double grafted as variety requires.

DISEASED CELERY PLANTS (P. D.).—The portions of plant are infested by the larvæ of the Celery fly or Celery leaf miner (*Tephritis onopordinis*). The pest sometimes appears when the plants are quite small, but usually towards the latter part of summer, and eats out, more or less, the inner portion of the leaves, forming blisters, causing them to turn brown and often eventually to die away. The best and most certain remedy is to carefully look over every plant so soon as the small larvæ are detected, pinch off the affected part of the leaves and burn them, or destroy the insects by pinching the blister between the finger and thumb. If this method be followed from the first, at the same time keeping the plant lightly sprinkled overhead with soot, at intervals of a fortnight or three weeks, whilst damp with dew, the insects will not cause much injury; indeed, the procedure has given almost absolute immunity from attacks of Celery fly for many years. Probably spraying, or lightly sprinkling overhead, by means of a fine rose watering can with tar water is the best preventive of Celery fly. The tar water is prepared by boiling $\frac{1}{2}$ lb of coal tar in two gallons of water for half an hour, or until it will readily mix with water, then diluting to 50 gallons with soft water. This prevents the fly depositing eggs, if not actually killing the larvæ in the leaves. As the plants are attacked for three or four months in some seasons, their destruction should be taken in hand immediately they are detected, or, better, take preventive measures in advance of attack. Paraffin emulsion solution is a good preventive and repressive application, spraying or sprinkling on the plants. As there are many pupæ in the diseased leaves these should be collected and burnt, and the ground where the Celery has been should, in due course, be deeply trenched or treated with gas lime.

GROWING VEGETABLES FOR SALE ON A LARGE SCALE (W. G.).—We do not know of any better plan to dispose of large quantities of produce than by arrangement with salesmen in the large centres of industry, such as the large cities and towns of Yorkshire, Lancashire, and the Midland Counties. Always have regard to distance of conveyance to market, often a matter of greatest importance, and ascertain what crops are likely to be most in demand, grow accordingly with the different requirements. Growers who do not do this, relying on the open market, very often do not realise enough for produce to compensate for salesman's charges and those for transit. We cannot give the values of crops, as they vary with season, demand, and supply. Besides, it does not do to "carry all the eggs in one basket," but growing crops suited to different seasons and in successional supply is more to the purpose, the crops following one another on the land, so that it is relatively never idle. This we have found the best plan, we having grown vegetables largely for the supply of the markets, and have only failed to secure good returns from the salesman when the market has been over-supplied or "glutted" with a particular produce, as is most commonly the case with "greens" during the autumn and winter seasons, the crops being follow-on, or "catch," and a glutting of the market is the consequence. Early Cabbages, early Potatoes, early Cauliflowers, and a successional supply of these with such crops as Peas, Runner Beans, Vegetable Marrow, Carrots, and Turnips, especially early, Onions, particularly main crop, Beet, and Parsnips, with, in some cases, Celery, early Lettuces, and, in most instances, Broccoli, are the crops that pay, even Jerusalem Artichokes bringing good returns. Asparagus is also a paying crop, and so also is Seakale, where means exist for blanching, and, of course, Brussels Sprouts are the staple green for winter, with good heads of Savoy. The chief point is to produce a superior article, everything of the best, and then the salesman has no difficulty in making satisfactory return.

NAMES OF PLANTS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (W. S. H.).—1, Pavia, sp.; 2, Berberis nepalensis; 3, Hypericum Androsæmum; 4, Erigeron philadelphicus; 5, Aristolochia; 6, Abies Bungeana. (J. P.).—1, Tibouchina macrantha; 2, Calceolaria mexicana; 3, Phygelia capensis; 4, Boehmeria nivea; 5, Polygonum Moly; 6, Pieris ovalifolia. (N. F.).—1, Aucuba japonica variegata; 2, Atriplex hortensis; 3, Azara microphylla; 4, Betula urticæfolia. (L. F.).—Catalpa bignonioides. (N. T.).—1, Tanacetum vulgare; 2, Cornus alba; 3, Adiantum Capillus-Veneris imbricatum. (M. N. O.).—1, Calendula pluvialis; 2, Lobelia tenuior; 3, Ipomœa Horsfalliæ.

NAMES OF FRUITS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (New Gardener).—These are fruits of the Strawberry-Raspberry, they are not likely ever to find favour; yes, the Loganberry is an acquisition to the hardy fruit lists. (Prentice).—1, American Mother; 2, Egremont Russet; 3, Adam's Pearmain; 4, Lord Derby. (N. T.).—1, Pear Pitmaston Duchess; 2, Gansel's Bergamot; 3, Seckle; 4, Doyenné du Comice; 5, Apple Annie Elizabeth; 6, Newton Wonder. (A. B.).—King of the Pippins. (Disappointed).—1, Grape Golden Queen, it requires careful culture, especially towards the finishing off; 2, Pear Durondeau. (T. M.).—Grape Royal Muscadine, a first-rate early variety, and would succeed in your Hamburgh house. (H. W.).—Large yellow Apple is Yorkshire Beauty; the small one is Fearn's Pippin.



The End of the Corn Harvest.

Before these lines will be in the hands of the reader we think that all grain crops, with, perhaps, the exception of those in His Majesty's kingdom far north, will be gathered in. Choirs will be practising ambitious anthems; well-known preachers will have been engaged for special services, and the local newspapers will be full of notices of harvest thanksgivings. We hope we may be able sincerely to offer thanks to the Giver of all good, but we fear throughout the length and breadth of the country there will be many heavy and sorrowful hearts.

We have been looking through many accounts of harvest—sent from all parts of the country, and we note that with the exception of the week ending September 19 the weather has been not exactly broken, but continuously wet. Heavy rains, heavy floods, heavy storms of wind—and one poor week of fine weather to set against it!!! We can contend with wet summers, cold springs, and unnatural winters, but we do hope for and need fine weather for the ingathering of the crops. There is a silver lining to every cloud, and we must be thankful for small mercies. Fortunately the weather has been cold, unusually so for the time of year, and hence there has been far less sprouted grain than we might have expected. Practically all is soft and out of condition, and it is only dire necessity that sets the threshing machine to work. Ready money must be had somehow, and thatch is needed quite as badly.

We think farmers this year will find another foe to face. The wet state of the country has driven rats from the land to the farm buildings, and they have already taken up their quarters high and dry and with storeroom at hand in the newly-made Wheat stacks. This has occurred in other unusually wet times, and rats have already been found in great numbers in the new stacks. It is not so much what they eat as what they destroy, but when the two are combined they levy a good percentage on the farmer's share. We cannot hope for great prices this season—condition is against it and of quality there is none. Whether quantity will in a measure make up for lack of quality is yet to be proved. It does not do to base the year's average on the first month's threshing yield.

A professor of great repute in the agricultural world has again been urging more corn, less roots, but surely, in the face of a season like the present he will have few followers.

We fancy, in spite of all the talk about enlarging our Wheat area so as to be better provided with food in time of war, the Wheat area next year may be considerably less. Another bad result of a late harvest will be the backwardness in sowing the crop for next year: there are great arrears of work to make up, and the days are appreciably shortening. We are not surprised to see that the value of English Barleys is some 2s. less than it was last year, this for the third week in September. The quantity sold was 5,977 quarters, as against 96,768 quarters of foreign, principally from Russia and Persia. These two countries supply us with a vast amount of grinding qualities. There is a good demand for foreign malting sorts, and it remains to be seen whether the foreign Barleys have suffered as much from the weather as our own. As far as we can see, Europe, as a whole, has experienced an excessive and prolonged rainfall. In France, Germany, Austria, and Hungary the crops have all been damaged.

We may be wrong in our surmise, but we fancy, with so much second-rate corn about and with the prospect, or, indeed, the fact of there being so many diseased Potatoes, there will be a great demand for pigs. Whether there will be pigs enough to "go round" is another question. We say advisedly diseased Potatoes, for accounts from all the great Potato growing districts are bad. When we consider how many hundreds of acres have been under water, the marvel is that there should be any good. Pigs seem to fatten on almost anything, but even pigs do better if the corn is of fair quality. They respond to generous treatment and give quick returns for a liberal diet.

Before we leave the harvest season of 1903 for ever alone we will just for a moment take a leaf out of Sir Walter Gilbey's book. Not a year passes but that excellent man pleads with a never-tiring zeal for a little help for those poor farmers who, having suffered shipwreck, are wearing out the remnant of their days in quiet backwaters, and finding it difficult to get the wherewithal for food and raiment. The Royal Agricultural Benevolent Institution does good work, and if only a little can be spared let that little be given without grudging, to bring some sort of ease and comfort to those who have seen better and brighter days. A little help is worth a great deal of pity.

Small Holdings.

There is an association for the purpose of supplying at moderate prices small holdings to persons suited to their cultivation. Those who buy land are expected to pay down 10 per cent. of the price of the land (hitherto from £18 to £30 per acre), and the rest by half-yearly instalments extending over from ten to fifteen years, with interest at five per cent. N.B.: *No law charges.* Purchasers are required to reside on their holdings, and failing their ability to erect dwellings for themselves, the association will do it on the same terms as that on which the land is bought. The trustees are Sir James Blythe and Mr. T. H. Whitley, M.P., Professor Long managing director, Harold C. Long secretary. The first farm purchased (and that only a short time ago) was Cudworth, in Surrey, 367 acres, and of that already 200 acres have been sold. Cudworth is two and a half miles from Holm Wood station, and six miles from Dorking. The idea is to grow fruit both inside and out, and there will be much erecting of glass houses; poultry rearing, dairy work, fatted pigs will be among the objects attempted. As one might naturally expect, there has been a tremendous number of land applicants (1,040), many totally unsuitable people without the slightest knowledge of agriculture or horticulture and entirely without capital, and who fondly believed and hoped the association would lend money to take the holdings, and stock them for nothing!

The most likely people, we think, to get on and make a living will be those who have graduated on a farm—foremen and superior labourers, who have knowledge of technicalities, are not averse to hard work, and who, above all, have the necessary capital. It appears that on one holding of twenty-five acres two men who have bought the land conjointly have built their own cottages, at a cost of £220 each. One of the men who in early life was a farm labourer took up later with bricklaying, and he is responsible for the buildings. Handy men of this sort will always thrive. It appears there is a brickyard not far from the farm. London fruit-growers have bought several lots, and with management this land may be paying sooner than an outsider would expect. Strawberries planted now, if the plants are good and full of

fibrous roots, will yield some fine fruit next summer—quality if not quantity—and we fancy that forward Gooseberry trees would do the same. How the man with four children is going to make butter-making pay with seven acres passes our comprehension. We should not dare to undertake the job. There is one thing greatly in favour of this project at Cudworth—proximity to good markets, both London and local. In the report which we read the land is said on the whole to be good—loam over subsoil of weald clay. A similar enterprise was started fifteen years ago in Dorset by Sir Robert Edgecombe, with the gratifying result that only one of the thirty holders has failed to make his undertaking pay.

Cheshire, too, through the good offices of Lord Toller-mache and Mr. Tomkinson, has its small holdings, and the occupiers have done well.

It will be some years before any decided judgment as to success or failure of the Cudworth experiment can be pronounced. If the promoters exercise due care in their selection of occupiers, we ourselves should have no fear for the future. If they are hard-headed, practical men, they will choose such, and only such. Many a man in country districts has given far more per acre for moderate land, and then had all the expense of conveyance beside, and still made a living for himself. The difficulty is to get hold of suitable land without having to pay a fancy price for it. By "suitable" we mean of fair quality and not miles from everywhere. We were only speaking of a first-rate farm the other day which will be in the market shortly to a farming friend. He acknowledged all its good qualities, even praising it more highly than we, but wound up by saying, "How could anybody go and bury themselves in such an out-of-the-way spot?" There is a growing distaste to isolated farmsteads. The master and mistress find it lonely, and labourers are equally averse to banishment from village pleasures. Even good land and the promise of bumper crops will not tempt men to become (in a measure) modern Alexander Selkirks.

P.S.—We have just seen in a daily paper an account of extraordinary land letting in small lots near Holbeach. Here are men giving from £3 to £5 4s. per acre per annum! What a pity these men could not be put in the way of acquiring the land permanently at a moderate and reasonable rate. How is it possible to make a living and pay such enormous rents?

Work on the Home Farm.

During the past week two items of interest have claimed all our attention, viz., threshing Wheat, and the Potato market. The latter is for the present quite disorganised; merchants are shy of buying, and the majority of farmers do not care to sell. The reason is not far to seek. The extreme moisture and warmth of the past fortnight have encouraged the growth of disease of a most virulent type, and the mischief has not only done immense damage, but is still spreading. Dealers will only buy by the ton, which does not suit farmers at present prices. Very few have been marketed, in fact the land is too wet for lifting at present. The haulm has died off so rapidly that lifting will become general as soon as the weather improves. All the less affected fields will be stored for keeping, for nothing but exceptional imports can prevent a high range of prices after Christmas.

Both Wheat straw and money were wanted, so the thresher has been at work, but the damp warmth has been unfavourable to good condition of the grain, which, though fairly dry, handles rather clammy. The price, 27s., is disappointing, still it might have been worse, and we are selling some water, at any rate. The conditions have favoured the ploughing of seed land, and except where late harvest operations have interfered there is little more to plough. As a fact, the area of Wheat after seeds is gradually diminishing as regards this district, as well as others we could name, and few farmers sow more than one or two fields, devoting the others to Potatoes, Oats, or Barley.

As Wheat invariably follows Potatoes, the Wheat acreage is fairly well sustained. Wheat is yielding well, which is encouraging to sow it, and our favourite variety, Squarthead's Master, will take a good deal of beating, but we have seen a small field of Garton's White Monarch, which has much taken our fancy, and if, when threshed, it fulfils expectations, we shall certainly give it a trial.

Lambs here are doing well, but we hear of serious trouble not far away. When a lamb is worth considerably more than a quarter of Wheat, farmers cannot afford to lose them. It is generally where sheep are most depended on that the greatest losses occur. Clover is plentiful, and nothing is better for lambs in autumn, especially when they are perforce on insufficiently ripe Turnips. Just now it is much cheaper than cake.

PLANTING SEASON



PAULS' ROYAL NURSERIES

WALTHAM CROSS, HERTS.

12 miles from London. South Entrance four minutes' walk from Waltham Cross Station; West Entrance three minutes' walk from Theobald's Grove; both Stations on the Great Eastern Railway.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Gold Medals in 1903 from Royal Horticultural and Royal Botanic Societies.

FRUIT TREES for the Orchard, Garden, and Forcing House. Hogg Memorial Medal, 1901.

HARDY TREES for Streets, Parks, and General Planting. Silver Medal from Royal Agricultural Society of England.

SHRUBS, both Evergreen and Deciduous.

CLIMBING PLANTS, Hardy and Greenhouse.

RHODODENDRONS, CAMELLIAS, & AZALEAS.

HERBACEOUS PLANTS in great variety.

BULBS and SEEDS, and all Garden Sundries.

PRICE LISTS ON APPLICATION. INSPECTION INVITED.

Upwards of 1000 Medals, Prizes, and other Awards at leading Exhibitions during the past 42 years.

SOLE POSTAL ADDRESS—

WM. PAUL & SON,
WALTHAM CROSS, HERTS.

Rose Growers by Appointment to His Majesty the King.

PRICE 10d., POST FREE.

WINDOW GARDENING
FOR THE MANY

Or Instructions for Managing Plants in rooms throughout the year, with Special Directions for their Propagation and Culture.

JOURNAL OF HORTICULTURE OFFICE, 12, MITRE COURT CHAMBERS, FLEET STREET, E.C.



For Market and Private Growers,

Ornamental Trees, Shrubs, &c.

Descriptive Catalogues Post Free.

J. CHEAL & SONS
Crawley, Sussex.STRAWBERRY
PLANTS.

All the Leading Varieties from the open ground and in pots.

Priced Descriptive Circular Post Free.

DICKSONS Nurseries CHESTER

No. 1216.—VOL. XLVII., THIRD SERIES.

For Present Planting!

CLIBRANS
TREES & SHRUBS

WHY plant common Forest Trees in Gardens and Ornamental Grounds when so rich a choice of lovely Trees as those undernoted, with their varied habits, bloom, or foliage, are available?

Acer dasycarpum (Silver-leaved Maple), graceful habit, very ornamental, 7 to 8ft, 2/- each; 8 to 9ft, 2/6 to 3/6 each.
Acer platanoides (Norway Maple), fine bold ornamental foliage, 7 to 8ft, 1/6 each, 12/- doz; 8 to 10ft, 1/6 to 2/- each, 15/- to 18/- doz; 10 to 12ft, 2/6 to 3/6 each, 24/- to 30/- doz.
Acer platanoides cucullatum, a pretty and charming var., 8 to 10ft, 2/6 each, 24/- doz; 10 to 12ft, 3/6 each, 36/- doz.
Betula papyrifera (the Paper Birch), a well-known elegant and graceful tree, 6 to 8ft, 2/6 to 3/6 each; 8 to 10ft, 3/6, 5/-, and 10/6 each.
Carpinus betulus (Hornbeam), forms an excellent shelter for more tender species, 7 to 8ft, 1/6 each, 15/- doz; 8 to 10ft, 2/- to 2/6 each, 21/- to 24/- doz; 10 to 12ft, 3/6 each, 36/- doz.
Cerasus serrulata alba fl. pl., produces large drooping clusters of double white flowers towards the end of April, standards, 2/- to 3/6 each.
Fraxinus arbutifolia, a distinct and handsome foliaged species, standards, 2/6 and 3/6 each.
Laburnum vulgare autumnalis, an autumn-flowering variety, 6 to 8ft, 2/- each; 8 to 10ft, 2/6 to 3/6 each.
Laburnum vulgare Parksi, the racemes of flowers measure 12 to 14in. in length, 6 to 8ft, 1/6 to 2/- each; 8 to 10ft, 2/6 to 3/6 each.
Laburnum vulgare Mossii, a remarkably free flowering variety, 6 to 7ft, 2/- each; 7 to 8ft, 2/6 each.
Negundo aceroides violacea, the leaf-stalks are prettily coloured with a violet shade, 8 to 10ft, 2/6 each; 10 to 12ft, 3/6 each.
Platanus orientalis (Oriental Plane), a majestic and graceful tree, 8 to 9ft, 2/6 each, 24/- doz; 9 to 10ft, 3/6 to 5/- ea.
Populus balsamifera trichocarpa, long, oval, dark green leaves, vigorous grower, 6 to 8ft, 2/- each; 8 to 10ft, 2/6 ea.
Populus fastigiata Wilsoni, a neat growing variety of pyramidal habit, 7 to 8ft, 2/- each, 18/- doz; 8 to 9ft, 2/6 each, 24/- doz; 9 to 10ft, 3/- each, 30/- doz.
Pyrus aria (White Beam), foliage bright green above downy white on the under side, 7 to 8ft, 1/6 each; larger sizes, 2/6 to 3/6 each.
Pyrus aria chrysophylla, large silvery grey woolly leaves, 5 to 6ft, 2/- each; 6 to 7ft, 2/6 each; 7 to 8ft, 3/6 each.
Pyrus aria lutescens, round, yellowish foliage, 5 to 6ft, 2/- each; 6 to 7ft, 2/6 each; 8 to 10ft, 3/6 each.
Pyrus sorbus (Service Tree), a well-known hardy, free-growing tree, 7 to 8ft, 2/6 each, 24/- doz; 8 to 10ft, 2/6 to 3/6 each, 24/- to 30/- doz; 10 to 12ft, 3/6 to 5/- each.
Pyrus aucuparia asplenifolia (Fern-leaved Mountain Ash), highly ornamental, 6 to 8ft, 1/6 each; 8 to 10ft, 2/6 each; 10 to 12ft, 3/6 each.
Pyrus aucuparia Fifeana, of pyramidal form, producing orange-coloured berries, 8 to 10ft, 2/6 ea.; 10 to 12ft, 3/6 ea.
Pyrus aucuparia pendula aurea (Golden-leaved Weeping Mountain Ash), standards, 2/6 to 5/- each.
Pyrus malus Parkmanii, fl. pl., rich carmine, semi-double flowers, 4 to 5ft, 2/6 each; 5 to 6ft, 3/6 each.
Pyrus salicifolia pendula (Weeping Pear), a graceful woolly-leaved tree, standards, 1/6 to 3/6 each.
Pyrus quercifolia (Oak-leaved Mountain Ash), 8 to 10ft, 3/6 each; 10 to 12ft, 5/- each.
Quercus palustris, a graceful cut-leaved Oak, 5 to 6ft, 1/6 each, 12/- doz; 6 to 7ft, 2/6 each.
Quercus rubra, rich red foliage, 5 to 6ft, 1/- to 1/6 each; 6 to 8ft, 1/6 to 2/- each.
Robinia pseudo-Acacia (Thorn Acacia, Locust Tree), produces racemes of white pea-shaped flowers, 6 to 8ft, 1/6 to 2/6 each; larger specimens, 3/6 and 5/- each.
Robinia pseudo-Acacia angustifolia, a pretty narrow-leaved variety of graceful habit, 5 to 6ft, 2/6 to 3/6 each; 6 to 8ft, 5/- each.
Robinia pseudo-Acacia monophylla, very distinct, leaves entire, not pinnate, 6 to 8ft, 2/6 each, 24/- doz; 8 to 10ft, 3/6 each, 36/- doz.
Tilia Europaea aurantia, an Orange-barked Lime, 7 to 8ft, 2/6 each; 8 to 9ft, 3/6 each.
Ulmus campestris Dampieri aurea, bright golden foliage, standards, 2/6 and 3/6 each.
Ulmus elliptica, a free-growing species well adapted for town, 7 to 8ft, 2/- each; 8 to 10ft, 2/6 to 3/6 each.
Ulmus montana Dovai, an upright vigorous-growing variety with large foliage, 6 to 8ft, 1/6 and 2/- each; 8 to 10ft, 2/6 each; 10 to 12ft, 3/6 each.
Ulmus montana macrophylla aurea, a rapid grower with bright yellow foliage, standards, 2/6 and 3/6 each.

A Complete List of all the choicest Trees and Shrubs is contained in our

TREE & SHRUB CATALOGUE,
Gratis and Post Free on application.

ALTRINCHAM & MANCHESTER



Journal of Horticulture.

THURSDAY, OCTOBER 15, 1903.

Old-Time Gardening.*

The Early Florist.

THE labours of the florist in early times have been so completely overlooked that a chapter of this series must really be devoted to him. It cannot be exactly determined when he made his first essay in floriculture. Some authorities, indeed, would have us believe that he was an importation from the Continent, particularly from Flanders; but on close examination it is impossible to discover any well-marked deviation from usual gardening practices at the dates noted, flowers that are supposed to have been introduced by refugees having undoubtedly been in cultivation previous to their arrival in England. At the same time it is, I think, manifest that the early florist was indebted to the Continent for at least material to work upon. He had the improved flower—the Carnation, Tulip, Anemone, and Auricula—placed as it were in his hands, and for many years he was dependent on foreign aid for any improvement in varieties. That, I think, is abundantly evident from contemporary authorities. And I consider it not at all unlikely that the fact of there being florists at all was due to the enlightened policy of the English statesmen of the reign of Elizabeth, who made it possible for the plant lover to obtain flowers from all countries, and to secure the literature existing bearing on their cultivation. At any rate, it is clear the florist was an established type of horticulturist before the reign of that Queen terminated, while at its beginning he was an unknown quantity.

It is most unfortunate that none of the early writers on gardening, except Hill, who treats the subject in the most meagre manner, give any indication of a knowledge of florists' ways such as we find in, for instance, French books,

* Continued from page 264.

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

and we have to depend on Parkinson for the earliest satisfactory account of the race. But, by the name of "Herboristes" Lyte indicates his existence fifty years previously, and there is little reason to doubt that the apothecary James Garret, as well as his son, was a florist in the true sense of the word.

One cannot be quite so sure of Mr. Nicholas Lete, or "Leete," as I have found it spelt. His position as a wealthy and highly esteemed citizen of London almost precludes the belief that personally he had time to work among so exacting a race of flowers as these; but no doubt the Tradescants, though gardeners, were imbued with the true spirit of the florist, and also Master Tuggye, of Westminster, whose collection of florist flowers was preserved by his widow after his death.

Master John Franqueville was another early florist who cultivated Anemones, and was the first to introduce *Rosa sulphurea* to gardens, though it was subsequently lost. His son was also a florist.

Then we know of a Master Bradshawe, and a Master Wittie, each as raisers and cultivators of Carnations. Evelyn's "Kalender" is largely, so far as it concerns flowers, devoted to what we should call special kinds, e.g., Hyacinths, Anemones, Ranunculi, Stocks, Carnations, Auriculas, and such like, and when Rea wrote his "Florilege" a year later, we find the reason in the vast number of varieties that were cultivated in all parts of the country.

It is a curious fact that the social and political troubles that convulsed England during a great part of the Seventeenth Century seem to have had no effect in lessening the enthusiasm of the florist, who, by the way, is first designated by that name by Rea. This gentleman introduces us to a number of the florists of his day, as, for instance, "that ingenious lover of these rarities, Sir Thomas Hammer." Then Mr. Rickets, of Hogesdon, near London, was not only a florist, but he was a nursery florist and a raiser in many sections, e.g., Gilliflowers and Auriculas. Of raisers of the latter he gives as many as sixteen names, without including himself. Among these it is not a little startling to discover "Mistress Buggs" and "Mistress Austin"! We find the name of Turner, a gardener, and of Mr. Jacob Bobart, of Oxford Botanic Gardens, as well as nurserymen and several clergymen, who have had a long love for the refined flower of the florist. Rea's son-in-law, Samuel Gilbert, seems to have been even a better florist than the old man, and he too was a clergyman.

It is too generally the opinion at the present day that all our florist's flowers are late productions, and that the early race of men and women who devoted their energies to the cultivation of these flowers are to be sympathised with for the quality of the material on which they had to work. There is no cause whatever for the indulgence of any such thoughts. Their productions may have been, and, indeed, were, in many respects different from those of the present time; but they had defined standards, they were continuously improving their flowers, and as with us, the fancy of one decade was the horror of that which followed.

With regard to cultivation, as an example, the "Willow" earth and the abnormal quantities of dung used in composts has often excited the surprise, and not infrequently the contempt, of moderns; but in the matter of these manurial earths we might well take a lesson from them. When used it was never less than two years old, and had been during that time most carefully prepared. Then, as to "Willow" earth, it was not by any means a necessity. Any kind of mould formed of decayed wood was esteemed, but none so highly as that of the Willow, which, it may be said, enjoyed a European reputation, and was, in fact, used by Continental florists before we find it mentioned in England.

The changes in a few years in these early florist flowers is very remarkable. Parkinson, for example, names very few old kinds; one or two Carnations, indeed, but the great majority were, when he wrote, recent introductions. Rea's flowers were quite a novel race, not only in the case of Carnations, but also Tulips; though there was less change evident in the case of other flowers, unless we include Auriculas, which had made great strides.

Carnation culture from this time, and during a long series of years, was a matter of extreme nicety. The florist cultivated almost solely a large flowered section, with "double pods," one flower only to each plant, and the greatest care

and attention was called for in preserving the earlier opened petals in condition till those in the second or inner pod were also expanded. In the case of the Auricula the advance was continuous. Most unfortunately, Rea determined not to illustrate his book, and we can only guess from his description what the flowers were like. Most were undoubtedly selfs; some were striped and a few double; but all alike were cultivated with much care.

Exactly the same thing happened with the Tulip. There were to be had, if they could be got, in great variety early in the century; but it is quite clear that from these a new type of flower was evolved, of which there were many hundreds of kinds in Rea's time. Dutch and French names jostled the vulgar English; for the florist of all ages lets not his national antipathies bewray his floral sympathies.

It is curious to remark the progress of the Carnation, which, by degrees, assumed the markings that continued for so long the distinguishing type of the florist varieties. This is the century (the seventeenth) of the earliest Picotee, as we recognise a type, with an edge of colour to a white ground, had appeared. It is noted by Gilbert in 1683, and was a purple edged flower. Shortly afterwards bizarres and flakes were recognised as types, and also Picotees.

The gardeners' societies that were first formed during this century exerted an unmistakable influence for good on flower culture. They can be traced backward, even in Scotland, well into the seventeenth century, e.g., that of Haddington, Aberdeen, and a wealthy one in Edinburgh. It is not at all improbable that these kept alive the interest in florist flowers which the constantly recurring vicissitudes in the fortunes of country gentlemen must have rendered almost impossible on their part to take any trouble with.

These societies, moreover, introduced the custom of showing flowers, which were brought to their stated meetings, examined by the members present, and, according to the qualities possessed, whether good or bad, condemned or established as varieties that had passed their examination with honour. They also, in their corporate capacity, introduced flowers from the Continent, which were distributed among their members; but the accounts of these transactions are so meagre that one has to trust a good deal to imagination, and believe that much good was effected in this way. Of course, in towns where nowadays there is nothing but houses and streets, there existed in these days well kept citizens' gardens attached to their houses, and in Edinburgh, the gardeners possessed within the city, land of their own.—B.

Winter-Garden Structures.

A definition of "greenhouse" and "conservatory" has been given in the following lines: "In the greenhouse the plants are mostly grown in pots, and are portable; in conservatories they are planted out and are permanent." The greenhouse at Kew (which so many of our readers have seen and know) is typical of its kind. The whole year through it is kept furnished by flowering batches of pot plants, that are staged in massed group-lets of one sort, or at most, two together for either a contrast or a harmony; but none are mixed, as is almost the universal rule in the greenhouses of private gardens. Yet taste says that the massing system is best. Be that as it may, we need not stay to discuss it here; and we are reminded that the greenhouse, moreover, is the "growing-house" oftener than not in the private gardens, and "the conservatory" is the show-house. The definition we quote, therefore, hardly generalises correctly.

The true conservatory or winter-garden—when on a private estate—whatever be the form or size, should be attached to the dwelling house; and, indeed, it is robbed of half its charm and utility when it is separated. It may be said that its usefulness decreases as the distance between it and the mansion increases. In a public park the case is entirely altered, and the structures there should be suited to the surroundings and the accompanying circumstances.

This week, by the kindness of Messrs. Richardson and Co., the horticultural and heating engineers of Darlington, we are enabled to show two patterns of winter-garden conservatories, pages 360 and 361. The types shown are both very elegant, and we may be able to show interior views of these in a succeeding issue. It is at this season that the need for, and utility of, such capacious glass structures are seen and felt. We shall have occasion to return to this subject again.



Cattleya Dowiana Rosita.

All who appreciate the richly coloured and elegant *C. Dowiana* will the better value a variety from it. In *C. D. Rosita* we have one of the best of its forms, and this came from M. Charles Maron, of Brunoy, France, some years ago, obtaining recognition at Westminster, when shown there, in the shape of a F.C.C. The stout sepals are soft cream, with a pronounced suffusion of rosy red at the tips; the broad, wavy, and somewhat fimbriated petals have a similar basal colour, but the rosy red is of a brighter shade, and is far more abundant. The superb lip is velvety crimson, while the golden lined throat has all the beauty of the typical plant.

The Week's Cultural Notes.

Dendrobium cambridgeanum, or *ochreatum*, as it is also known, is a puzzling species to many who are growing it for the first time. It is never a very strong grower, and when the blossoms are past the pseudo-bulbs, or stems, often begin to wither rapidly in a manner very disconcerting to those in charge. But really there is nothing to be alarmed at in this, as when new growths push, the plant is in the habit of renewing itself rapidly. It is very erratic in its time of flowering, and I have seen a nice plant of it during the present week in full flower, quite four months behind its usual time. As with *D. chrysanthum* noted last week, the plants must be kept growing gently during winter, not rushed on in the insufficient light then prevailing.

Considering the dull season the popular *D. Phalaenopsis* has done remarkably well, though in many instances I have noticed a falling off in colour, due to lack of light to consolidate the growths. The winter's rest in a warm and moderately dry atmosphere will put things right, and we must hope for a better season next year. *D. bigibbum* has fared worse than its stouter growing compeer. Many of the spring flowering species are quite ready for the resting quarters, all the leaves having fallen and the stems being well ripened. Light, plenty of air, and a cool, dry atmosphere are now required.

In the cool house the pretty *Oncidium cheiroporum* is growing freely, and must not be allowed to become dry at the roots, though it is never a thirsty plant, liking a thin compost and plenty of air about its roots. Small wood baskets or pans for suspending suit it best, and all the year round a moist, mild, and airy temperature is desirable. Should

the plant be in need of fresh compost it may be given at this time, taking care not to disturb the older roots much. It is one of the brightest and prettiest of winter flowering Orchids, and should be in all collections.

O. concolor, another small flowering beautiful plant, has finished growing, or nearly so, and will need less moisture at the roots, but not this or any of the spring bloomers must have so little that the pseudo-bulbs shrivel. The *O. macranthum* section comprising, besides the type *O. serratum*, *O. undulatum*, *O. superbiens*, *O. hastiferum*, *O. lamelligerum*, and others, must never be dried, as they require sustenance winter and summer, and are more likely to shrivel than almost any other species. Owing to their habit of growth, viz., one pseudo-bulb occurring a good deal higher than its parent, the new roots are exposed to insect attacks, and if any doubt about slugs or cockroaches exists a little peat and moss should be laid over them for protection.—H. R. R.

Orchids and Symbiosis.

It is now well known to many that Orchids, for their successful rearing from seeds, do best when grown in association with older plants of the same family. Before this fact was recognised (says the "Gardening World") thousands, and probably millions of seeds were annually lost by sowing them on the surface of pots, like the seeds of annuals or perennials of more common kinds. M. Bernard has recently laid before the French Academy of Sciences the result of some of his experiments, by which he demonstrates that Orchids are unable to live unless certain microbes are present in association with the roots of the plants. Particularly is this the case with seedling Orchids making a start in life. We have seen large numbers of them successfully raised from seeds until the green was quite visible to the naked eye, after which they went off rapidly, when merely grown on pans of soil.

M. Bernard cultivated those microscopic fungi by themselves, and also Orchids apart from them, but the latter did not thrive until brought in contact with the former, after which the growth

of the plants became quite normal. Possibly, however, if all cultivators would take care to inoculate the soil in which they attempt to raise seedlings with some of that taken from pots of growing Orchids, success might become perfectly certain, even with seedling Orchids. Some of our expert Orchid raisers, however, succeed by slightly different methods, such as by sowing the seeds on a coarse kind of cloth on the top of pots or pans.

Cypripedium niveum at Highbury.

This gem of *Cypripedium* (botanically *Paphiopedilum*) is grown very successfully in Mr. Chamberlain's garden. A note as follows, appears in this month's "Orchid Review": "The plant came here as newly-imported some four years ago, and is grown in the warm house, where it occupies a position at the warmest end, some 2ft from the glass roof. Two years ago it was placed in a 10in pan, well drained, in a compost of fibrous loam, sphagnum moss, and limestone, in equal parts. It is given abundance of water

during the summer months, and never allowed to become really dry in winter. With this treatment growth is luxuriant, the plant retains every leaf, and is the envy of every Orchid enthusiast."—J. MACKAY.



Cattleya Dowiana Rosita.



A Compliment to Cross Breeders.

The "Evening Standard" says: "The high prices paid for special seedlings lately have been a matter of profound surprise to those who are ignorant of the perfection to which the science of Potato culture has been raised. There would appear to be nothing to justify the payment of 28s. per pound, without some knowledge of the infinite patience and labour which go to the making of the costly blends which are so eagerly sought after. The process is tedious in the extreme, and the percentage of successful results very small. New specimens are being constantly developed, the process sometimes occupying years. To combine the qualities of flavour, size, and productiveness requires a nicety of judgment which can only be acquired by years of painstaking study. To many the cultivation of the humble root is as fascinating a pursuit as that of the Rose grower or the chicken fancier. It is by the work of these enthusiasts that the national crops are preserved from deterioration, and the ravages of disease and blight resisted."

Japan Plums.

Prunus Simoni and the Kelsey have given moderate satisfaction in California, but the American-Japan Plum, grown by Burbank, and bearing his name, leaves them all in the shade. It is a cross between *Simoni* and some hardy American sort. The size is phenomenal. No fruit in the New Orleans market makes a better showing than the Burbank Plum. It is the size of an average size Peach, with yellow flesh and small seed. The skin is smooth and free from blemishes. It is reported hardy as far north as New Jersey. Japan Plums all have a tendency to form broad, spreading trees. This can be obviated by pruning soon after the bearing season is over. Wide spreading limbs frequently break under heavy crops. Plums are stone fruits, and all such are heavy. Kelsey is smaller than Burbank, and of a greenish-yellow colour, to the uninitiated appearing to be unripe. In flavour it is excellent. It is one of the fruits frequently saved by smudging, as it blooms and sets fruit quite early in the frosty spring. The Japan Plums are wonderfully free from black knot, and from the attacks of the curculio. The trees are thrifty growers.

The Result of Disafforestation.

The tourist who travels in Greece, says a writer in the "Revue des Eaux et Forêts," is astonished at the dusty country which, formerly so rich, has become so poor. The divine Hellas never had a rich and fertile soil, but it was not a desert. We should say to-day that the Sahara is approaching, and that death reigns there. However, the Greeks will tell you that it was not always thus. The crafty Venetians were the cause of it. Having need of wood for the construction of merchant vessels, they persuaded the Greek peasants to cut down and sell the trees. "Cut down the trees," they said, "which are the haunt of sparrows which devour your crops. Cut down the trees, and you will be twice as rich by the gold which we give you for the timber and by getting finer harvests." The wood cutters felled the Oaks, the Olives, and the Laurels. Then the Turks passed through the country. Fires completed the work which the axe had begun. The sacred woods of Greece were converted into ships and smoke. The wood cutters, more than the Turks, had done irreparable mischief. Under a hot sun, the shallow soil cracked and became exhausted. The wind carried away as dust the ancient soil of Greece. The forests which formerly attracted the clouds and caused the rain to fall were no longer there; rain came no more. The springs dried up. An arid desert was created, and it will now be the work of centuries to resuscitate the country of Zeus, father of rain, and of Plato, father of ideas. The writer then goes on to explain that the same cutting down of the forests is going on in Corsica, and that the results will be the same as they have been in Greece.

An Amateur's Begonias.

I enclose a photograph of a group of Begonias, grown by Mr. C. E. Harvey, Rose Villa, Acocks Green, Birmingham, an enthusiastic amateur gardener, who cultivates well all things he can accommodate in his greenhouses. His employment requires him to leave home at seven o'clock each working day, and he returns at about seven in the evening, except Saturday, which is a short day. He does all the work himself in regard to potting, watering, and propagating; and his greenhouses always contain something interesting, and often exceedingly beautiful. Many of the Begonias are very fine specimen plants, measuring about 30in high, and nearly as much through. The best double flowers measure 5½in to 6½in in diameter, including the following varieties—Annie Peeters, Beauty of Belgrove, Bouquet Lumineux, Duke of Fife, Duke of Teck, Golden Ball, Paul Verlaine, Picotee, Souvenir de Pierre Notting, Lady Dorrington, Royal Sovereign, and Sir Trevor Lawrence. The largest single flowers measure 7in in diameter, the favourite varieties being Duchess of Leinster and La Candeur.—JAMES UDALE. [A pleasant note, and a happy one. We wish Mr. Harvey still greater success, and hope to hear of him again. The photograph, unfortunately, would not have reproduced successfully.—ED.]

House and Church Decorators.

An excellent and suggestive lecture (reports the "Yorkshire Post") was given on Saturday night to the members of the Leeds Paxton Society by Mr. J. Turton, of The Gardens, Becca Hall, on decorations for houses and churches. Mr. Turton, who is well known as a successful floriculturist, has had great experience in this kind of work, and his hints were of a thoroughly practical nature. The defect of most of the floral decorations that one sees is that they are too stiff and formal, and Mr. Turton pleaded for greater breadth and freedom of arrangement. With regard to materials, he called attention to the excellent effects obtainable by the use of good tall Palms, *Dracenas*, and Bamboos, and evergreen shrubs, such as Hollies, Yew, Box, Cupressus, and Tree Ivy. Berries from the wild Rose, in conjunction with Virginia cork, are useful for hiding pots, &c., and screens well draped with flowers and foliage look well. Tin troughs containing sand and water, and filled in with choice flowers look nice, and arches made of strong wire form useful foundations. Warm, rich colour can be obtained by the use of the berries of wild fruits. In church decoration he especially counselled his hearers to avoid repetition of effects. Mr. Turton also gave some very practical hints respecting the decoration of tables, rooms, &c.

Osteomeles anthyllidifolia.

This plant is not regarded as quite hardy, says the "Gardening World," but there is a fine specimen of it against a south wall in the Royal Gardens, Kew, where it has stood for some winters uninjured. The narrow, pinnate leaves are of a rich dark green, and cover the wall in a manner quite different from most shrubs usually employed for that purpose. The flowers are succeeded by berries resembling those of a Hawthorn or Cotoneaster, but having longer stalks, so that they are more or less pendent from the short leafy spurs. The species is a native of India, China, and the Pacific Islands. The native habitats do not augur much for the hardiness of the plant, and that may account for its being included in the "Handlist of Tender Dicotyledons," but, judging from its past behaviour, I should think, says the writer, it is hardier than it gets credit for. The evergreen leaves are the strongest argument against this idea of hardiness, but provided it is planted against a wall in a sheltered position it may yet prove worthy of more extended cultivation on walls in prominent places near the doors of dwelling houses on account of its beautiful foliage and red berries. At least one other species is in cultivation, but eight of them are known to science. Curiously enough, only one of them is native to the Old World, namely, that under notice, the rest being natives of the Andes of South America. The plant described in this note is the only one having pinnate foliage, so that it may be taken for granted it is the best and most handsome for garden purposes. Some of them are trees, the rest being branching shrubs, of which *O. anthyllidifolia* is the most graceful.



Rose Jottings: Varieties, and What Not.

I am about in time, I expect, Mr. Editor, to offer the benefit of my long experience to your readers who are thinking of sending their orders to our professional brethren, except, perhaps, in the case of those early birds (and, undoubtedly, they are right) who, by applying in good time, secure the worm, in the shape of the best plants, and for certain all the varieties they order.

A fortnight hence, more or less, according to the weather we have, will be quite soon enough everywhere to move plants, so unripened and succulent as the wood must be. I am the more tempted to mention the varieties I have myself found most useful to the exhibitor and public generally, from the revolution that has taken place, during the last few years, in the gradual displacement of the H.P.'s by the H.T.'s, as noticed lately in your Rose issue. Nevertheless, I venture to predict that a goodly number of the old H.P.'s, especially the dark varieties, will hold their own for many a long year.

It is interesting to notice how hardy the H.T.'s are already. I can point to Kaiserin Augusta Victoria, Viscountess Folkestone, and Mrs. W. J. Grant as instances, from several specimens I have in different parts of my garden, on large bushes in superb bloom, with well ripened wood.

It is astonishing what delusions some people labour under, especially among my unsentimental sex, in Rose lore! I was dining at a table d'hôte in South Wales the other day, when across the table there reached me a fine manly voice (which I heard afterwards proceeded from a distinguished general) expressing his opinion that "He had quite given up all interest in Roses since, of late years, all the perfume had been bred out of them!" Now, I appeal to the public as to whether such an assertion is a fact, or whether the exact reverse is not the true state of the case? Is it not rather to the infusion of Tea "blood" that the H.T.'s, or the greater part of them, derive their delightful fragrance? To give two especially noticeable instances I would mention Mme. Abel Chatenay, and the new Robert Scott; of the latter of which our American cousins may be justly proud. Subjoined I give a list of (1) H.P.'s which will in all probability hold their own; and (2) of H.T.'s which are most to be recommended.

H.P.'s: Alfred Colomb, Mme. Rothschild, Ben Cant, new, too robust for present wet season; Capt. Hayward, blooms early and late; Dr. Andry, Duke of Edinburgh, Dupuy Jamain, Etienne Levet, Frau Karl Druschki, everybody's Rose; Général Jacqueminot, Mme. Gabriel Luizet, Marquise de Castellane, Merveille de Lyon, Mrs. R. G. Sharman Crawford, superb this year; Ulrich Brunner, and Ulster.

H.T.'s: Antoine Rivoire, Bessie Brown, wet season spoils; Caroline Testout, indispensable to breeder, exhibitor, and every class of grower; Countess of Caledon, robust, grand flowerer; Gladys Harkness, Irish Glory, delightfully bright; John Ruskin, Kaiserin Augusta Victoria, Killarney, Lady Clanmorris, La France, Mme. Abel Chatenay, Marjorie, small, but charming; Marquise Litta, Mildred Grant, season adverse; Mrs. W. J. Grant, Robert Scott, White Lady, and Viscountess Folkestone, which is indispensable.—HEREFORDSHIRE INCUMBENT.

American Roses.

I was greatly interested in Mr. Raillem's note on page 260, September 17, on American Roses; and I presume that he is aware that practically every Rose in America is grown on its own roots, both indoor and out. The amateurs root the cuttings under handlights, jam-jars, &c., and having had good results from such methods in this country, I can recommend the plan. The American nurserymen, however, strike in houses and pits, not cool pits, but those with hot steam pipes running through the beds. The manner in which they turn out Roses is astounding, for one can buy little plants 6in high, out of pots, for three cents. These bushes when received are potted and protected for awhile, and then planted out, and it is a sorry garden that has no Roses during the season. I myself this year have seen grand blooms of Bessie Brown, J. B. M. Guillot, Mme. Pernet Ducher, and others, on plants that were cuttings last October, and rooted under a jar. The bushes are now 1ft high, with thick, strong shoots.

As Mr. Raillem remarks, the American marketmen cut their blooms and throw out the plants; and does it not seem better to raise Roses in such a manner? Why, it is like growing double Primulas. Respecting Meteor referred to, it is claimed to be the finest crimson Hybrid Tea in the United States; and there is also a climbing sport from this variety. I cannot find any reference to the double Fortune's Yellow as grown in California at the moment, but Lamarque, Solfaterre, and Perle des Jardins are exceedingly popular.—A. W.

Rose, Meteor.

This Rose is well-grown at Waltham Cross. We were much impressed by the all-round merit of the variety. First of all it is vigorous and thrifty; the wood and foliage are such as to inspire confidence in the minds of even inexperienced cultivators of pot Roses. The flowers, too, are large and well built, and we write from knowledge of the variety as seen in the middle of September. Mr. Wm. Paul omits a description of it, however, from his list in the tenth edition of "The Rose Garden." What its failings are (if any) in this country we must leave for others to relate, but at present we have a pleasant reverie of its thick-petalled, rich purple-crimson blossoms, so freely borne.

Sir William Jackson Hooker.

(Continued from page 335.)

II. GLASGOW, 1820-1840.

"Early in February, 1820, my father was appointed by the Crown to the Chair of Botany in Glasgow, and having despatched his library, herbarium, and household effects to London, to be thence sent by smack to Leith, and on to Glasgow by canal, he severed his connection with Halesworth and the brewery. In May he presented himself before the Senate of the University, who gave him a flattering reception, read his inaugural thesis (the Latinity of which, thanks to his classical father-in-law, was highly praised), and was duly installed, with the welcome addition of having the honour of LL.D. conferred upon him.

"Before enlarging on my father's success as a lecturer, I may premise that the teaching of botany in the first quarter of the last century was very different from that which now prevails. It was regarded as ancillary to that of Materia Medica, and as a means of enabling the practitioner to recognise the plants used in medicine when there might be no druggist to appeal to. Furthermore, it was required by the principal examining bodies for medical degrees or licenses that the candidate should have attended a course of lectures delivered in a botanical garden registered for the purpose; and in these gardens the plants were invariably arranged according to the Linnean system, which consequently had to be taught. . . . Throughout the course my father's artistic powers were exercised with chalk and the blackboard; and he gradually accumulated a magnificent series of folio coloured drawings, especially of medicinal plants, which were suspended in the class-room as occasion required. I well remember the murmur, and even louder expressions of applause, with which he was greeted on taking the chair, when the number or interest of these pictures was conspicuous. Before his second year's class had assembled he had published the 'Flora Scotica' for its use, and an oblong folio of lithographed illustrations of the organs of plants by his own pencil, with twenty-four plates and 327 figures, a copy of which was placed before every two students.

In the course, three excursions were taken, two in the neighbourhood of Glasgow, and one towards the end of June, of five or six days' duration, to the Western Highlands, usually to the Breadalbane range. This latter was eagerly anticipated by a contingent of ten to thirty students, amongst whom were frequent accessions of botanists from Edinburgh and England. Further, to stimulate their zeal, he habitually invited the more industrious students to breakfast with him after the class (which was from eight to nine a.m.), when he would show them books, and give them, from his store of duplicates, specimens of rare British plants. To conclude this episode of his life, it must be recorded that his success as a lecturer was phenomenal; his tall figure, commanding presence, flexible features, good voice, eloquent delivery, and urbane manners, are vouched for in every obituary notice of him. His lectures were often attended by gentlemen of the city, and even by officers from the barracks three miles distant. The students of his first year's course presented him with a handsome silver vasculum, chased with a design taken from the Moss Hookeria lucens, and those of the second year with a richly bound copy in ten volumes of Scott's Poetical Works.

Except for visits to London, Yarmouth, or the Highlands, botanising with Greville or Arnott, and once to Paris, he rarely left home. He was at his desk with pen or pencil by eight a.m., and never left it much before midnight. The late summer and autumn weeks were frequently passed with his family at watering-places on the Clyde, usually at Helensburgh, where he enjoyed the society of two neighbours of scientific tastes and culture, James Smith, Esq., F.R.S., of Jordan Hill, and Lord John Campbell, afterwards Duke of Argyll, father of the late Duke, who inherited his parent's scientific tastes. In 1837, he purchased a cottage with an acre of ground, 'Inverreck,' near Kilmun, on the Holy Loch; a lovely spot where he could indulge his fondness for gardening. In the touring season he received many English and foreign friends who took Glasgow on their route for the Highlands, both to visit him and to avail themselves of his experience of roads, conveyances, and accommodation.

(To be continued.)



Strawberries in October.

Late in August an invitation was received at this office from the Rev. A. Foster-Melliar, M.A., Rector of Sproughton, near Ipswich, in Suffolk. Mr. Foster-Melliar is far better known to Journal readers as the master Rosarian who writes above the pseudonym "W. R. Raillem" but he has other loves besides the Roses; and his letter on this occasion said: "Come and see my Strawberries." This was a bad shot, for we are strong in the fashion here, and take our holidays in August.

I had been almost within sight of "John o' Groat's Hoose," up among the Hielan' hills, with their caps of snow and robes of purple, and had hardly come back to the desk once more (and this was now late September) when once again came the kindly cry: "Come and see my Strawberries." It was a Friday, and within twenty-four hours I had both seen, admired, and tasted the fruits of a crop such as I never have seen equalled anywhere. I must be cautious in the use of figures, else my very truthfulness will foil my purpose. But the figures can stand for a moment.

Strawberries in October? Yes. St. Joseph Strawberry; St. Antoine de Padoue; and La Constante d'Automne: these are the varieties. Quietly Mr. Foster-Melliar led the way through the poultry yard with its perky, beautiful black Minorcas and sturdy Leghorns, to a gate that leads to his garden of specialities; and as we paced the path, he chatted of the Apples, and was glum over the failure of his Cox's Orange Pippin trees in all parts of the garden. Do as he may, the trees will rust and always fail.

But now we are at the Strawberry bed: the new plantation that was made early in August. Already one notes exceptional methods of treatment, the plants are a yard apart either way—a yard from row to row: a yard from plant to plant. These young Strawberries will yield fruits next summer. Five, or six, runners will be chosen from each of them, and made to root around the central parent plant in the way I try to show by the agency of the printer.



Fig. 1.—The parent plant with five runners around it.

Fig. 2.—The parent removed later in the year, leaving a circle of plants.

Figure 1 is intended to show the position of the central plant and its runner plantlets. Figure 2 shows the parent removed from the centre, leaving a large circle of plants formed by the now developed offspring. The reasons for taking away the original plant are to allow freedom of air and light, for the plants develop so well and bear such heavy crops that this excision is imperative. Furthermore it allows a space for the foot, there being also a tiny alley between the rows.

The facts so far are: 1, the plants put in this summer are 3ft apart; 2, they yield fruit next year; 3, the runners, with the exception of five or six, are scrupulously pinched off; 4, those chosen form a circle round the parent; 5, the parent is dug out at the end of the season; 6, the runners or plants are left to form a plantation which lasts three years.

Culture? Mr. Foster-Melliar has no secrets: he cultivates carefully and assiduously; treats his ground to good doses of manure from the farmyard, and as his soil is light, it can take as much as he can afford; and lastly, muscle is expended in spade work. But I must not forget to say that he is a great apostle for the thrifty use of the Dutch or the Sproughton hoe, the latter an invention of his own, and which many of our readers probably employ. A Sproughton hoe is the constant companion of the

veteran cleric and gardener, as he stalks across his lawns or amongst his fruits and Roses, taking the "legs" from a Groundsel here, or shuffling off a Plantain there—and it is the best of staffs!

Only twice this year did Mr. Foster-Melliar supply liquid manure (or wash) to the Strawberries; and as the weather was rainy, it was given without being diluted. A mulching of short manure is given very early in spring. In order to hold up and protect the weighty yield of fruiting trusses from dampness and dirt, the Rector of Sproughton employs stout wire, like telegraph wire, a quarter of an inch in thickness, and bends it to form a circle, the ends being turned down and fixed in the ground. It is like the accompanying diagram; and, of course, the trusses have every chance to ripen. Home-made supports of this sort are perfectly effectual, and are cheaper than any other. The making of them might furnish work for the garden-men during the dull days of winter.



Mr. Foster-Melliar made no complaint against the slugs; but bees and wasps are a sore trial, and for them he places little pots containing beer and treacle. These interesting but harmful insects will leave Peaches and come to the Strawberry beds the moment the odour of the latter reaches them. In order to make sure doubly sure in protecting the fruits of his labours from the larger birds, he has made moveable frames, each 5ft broad and over 6ft high, covered with small meshed wire-netting. The advantage of these frames is, of course, that they can be separated and again pieced together when a new plantation has to be covered.

It only now remains to say that the system he adopts, and the varieties he so manifestly favours (there being no others than those named in his garden) amply repay him for his pains and his choice. *Every day since June, for the last three years, he has been able to pick a dish of Strawberries;* and the bed is very little larger than the floor space of a gardener's cottage.

In late September he could pick many dishes, and the fruits were first-rate. They were all as large as an average Vicomtesse Hericart de Thury, firm, sweet, and juicy, and coloured to perfection. Constante d'Automne we both agreed upon as being more saccharine and richer than St. Joseph, though the latter is an exceptionally free cropper. Choosing the best looking plant I saw, I counted twenty individual trusses, and each truss was laden with ripe and ripening Strawberries, while the tips were profusely flowering. The Ipswich Gardeners' Society as a body, have paid a visit since I was there, and possibly some of them may support me in saying that a finer Strawberry display could not be seen. Twice Mr. Foster-Melliar has tried to photograph the bed, but neither time was successful.

The St. Antoine de Padoue is grown in a bed by itself. The plants became a prey to leaf-spot disease, which formed confluent patches. This variety is far softer in leafage and growth than the other two; it grows rampantly, but is susceptible to attacks which the others resist. What was to be the cure? Through this journal the owner had advice from Mr. George Abbey, who advised that a thin coating of straw be spread over the plants, and be set on fire. This was to destroy the spores of the Sphaerella, even though it consumed some of the leaves. The advice was followed. They were burnt last July, and in two days new leaves were vigorously asserting themselves. Seen at the end of September with large fruits and a superabundance of foliage, one would never guess they had had such a drastic check.

Mr. Foster-Melliar would like to see this variety crossed back upon St. Joseph, as he affirms (which is substantiated by his plants) that it is losing the Perpetual character. Notwithstanding the victorious combat of the leaf-spot in July, the new foliage is flabby and soft, and the watchful cultivator shook his head, saying, "They'll soon fall a prey again," and the warm, damp weather will doubtless have tended to bring about a recurrence of the trouble.

Notwithstanding the paragraphs about Strawberries in all the newspapers during the last fortnight, it is hardly likely that market men will devote themselves to any considerable extent to the culture of autumn-fruiting Strawberries. The seasons are too risky; and a single sharp frost, or half an hour's hail, or dripping and cold days would almost spoil all their chances of profit. There is, too, quite a goodly selection of other fruits on the market at this season, and these claim the public palate. But far more I think might be done in private gardens. We go to great lengths in order to provide forced Strawberries in February and March; why not have them also in October?

The story of Linnæus having cured himself of gout by subsisting for six weeks on Strawberry fruits may be true, or it may not; just as the other story of a man who journeyed

to Southampton at the beginning of each Strawberry season, and shifted his ground northward as the Strawberries gave way at the south, in order to enjoy the longest possible season, may also be fiction, but there are none of us who do not love an odorous, melting, sweet and briskly-flavoured *Fraisier*, as the French name it. The Latin, or generic, name is *Fragaria*, and it is interesting to note that the Highland clan name "Fraser" comes from this. The Perpetual Strawberries are the outcome of crosses with *F. tardissima* and varieties of the Perpetual Pines, Hautbois, and Alpines.—J. H. D.

Vines in Pots.

Well managed Vines in pots produce useful Grapes, and often better than Vines planted in borders, from the conditions of culture being more favourable. This is the case where the Vines are given bottom heat. To insure success the canes must be strong, thoroughly ripened, and duly rested.

As a start must be made about November 1 to have ripe Grapes in March or early in April, the tree-leaves and litter should be in due course of preparation for affording a mild, sweet bottom heat. The heat about the pots should not exceed 65deg at the start, bringing up the fermenting materials to the level of the pots by degrees, so as to augment the temperature to 70deg to 75deg by the time the Vines are in leaf.

Any Vines in pots for starting later should be placed under cover, an open shed with a north aspect being suitable, but the pots must be protected with dry hay or straw, and mice and rats kept down, or the animals may render the Vines useless by girdling them at the collar.—A.

Cherry House.

A structure devoted to Cherries is not common, and is remarkable, as no fruit proves more useful for dessert in the spring. The house for Cherries should be light, well ventilated top and bottom, and efficiently heated. A lean-to or three-quarter span facing south is most suitable for early forcing, say to have the fruit ripe in April, or a span roof with the ends north and south for affording fruit in May and June. The trees may be trained to a trellis fixed 12in from the glass, border inside, and not made all at once. A 4ft to 6ft width of border, according to the size of the trees, is sufficient to commence with, draining it with rubble 9in deep, and on that a 3in thickness of old mortar rubbish. From 20in to 24in depth of soil is ample, but deeper at first to allow for settling. Good turfy loam, preferably rather strong, with lime rubbish from an old building one-fifth, and a sixth of road scrapings, form a suitable compost. The trees may be planted as soon as the leaves fall. Those trained to walls four to six years, and in a fruitful, healthy state, also recently lifted so as to bear removal safely and without check, are the most suitable. The border being put together compactly, and the trees firmly planted, following with a good watering, and mulching with stable manure, duly sweetened and about 1in thick, will give a fair crop the first season. The most suitable varieties are Early Rivers, Governor Wood, and Black Tartarian. The roof lights should be taken off and remain so till the beginning of next year.

Cherries are readily forced in pots, and give a long succession of fruit. The house may be heated for forcing, or a cool one, well ventilated, and as the trees ripen their crops they can be placed outdoors. The trees should be secured at once. In potting, it is necessary to provide good drainage, and ram the soil firmly. Trees that are in as large pots as desired need only have the drainage rectified and the surface dressed, or the drainage may be cleared away, a few inches from the base removed, the roots shortened back, and fresh soil given as advised for borders, with a fifth of well decayed manure, removing also the loose surface material and supplying rich compost. For forcing in pots, Early Rivers, Belle d'Orleans, Empress Eugénie, Governor Wood, Black Tartarian, Black Eagle, Elton, and Mammoth are good. For a cool house, Belle d'Orleans, Early Rivers, Early Red Bigarreau, Empress Eugénie, Bigarreau de Schrecken, Governor Wood, May Duke, Black Eagle, Archduke, Nouvelle Royale, Florence, and Late Duke. These are compact growers, and the following large growers: Early Jaboulay, Black Tartarian, Bohemian, Black Bigarreau, Elton, Reine Hortense, Bigarreau, Bigarreau de Mezel, Mammoth, Duchesse de Palluau, Bigarreau Napoleon, Belle Magnifique, Tradescant's Heart.—G. A.

Border Carnation, Mrs. Lora Armstrong.

During the period of the open-air display of Carnations this year, we were favoured by the introducers of this new Carnation with a beautiful posy of the richly distinctive flowers. Now we are able to represent in print, a photographic reproduction of the variety, and we might again remark that this is one of the most handsome Carnations we have lately handled. The smooth-petalled, strongly-built flowers are a rich brick-red salmon, and delightfully scented. The raiser was Mr. J. Dowling, gardener to Mrs. Lora Armstrong, Carrickmines, and the introducers are Messrs. Wm. Watson and Sons, Clontarf Nurseries, Dublin. It has been certificated both at Glasgow and Dublin.

Potato Challenges.

The Potato market has been distinctly excited during the past few weeks. The world has been startled by the vigorous booming of new varieties, reports of fabulous prices, and prophecies in regard to yields which have fairly taken away the breath of the old-time farmers. When a Spalding tradesman can command £20 a stone for Potatoes, as has been done on more than one occasion recently; when, in a specially trying season, it is demanded for a new Potato that it is absolutely disease-resisting; when, in a single week, there appear three separate challenges in connection with three different varieties of Potatoes; when there are all sorts of rumours of extraordinary yields and of huge profits made by raisers, it is not at all surprising that more than ordinary curiosity is excited.

So important have been the Potato developments in this (Spalding) great tuber-producing district of late, that during the past week or two experts and large growers from all parts of Great Britain have been visiting the district, and instituting inquiries on the spot. Not only so, but these gentlemen meant business, and they have been keenly struggling one against another to capture large acreages of the Potatoes grown here—



From a photo.

Watson &

Border Carnation, Mrs. Lora Armstrong.

about. The chief point of controversy, however, has been—Which of the new varieties is the coming Potato? Which will last longest, go the farthest, pay the best?

Interest amongst Potato growers reached fever heat when there appeared three challenges, the Potato championed being the Northern Star, the Evergood, and King Edward VII. We are not experts; and, where these gentlemen differ so widely, as is shown by the letters received by the Editor, we are not inclined to dogmatise. One thing is quite clear, however, that in the test which was applied last week, the Evergood scored triumphantly. Mr. W. J. Atkinson, of Weston, gave a fair challenge, and what was the result? That in this treacherous year, when so many acres of Potatoes are blighted, in 11½cwt. of Evergood Potatoes dug in a single field, after the most careful scrutiny, less than 2lb of blights were discovered. The challenges were the talk of the Corn Exchange at Spalding on Tuesday; the result of the Evergood test was the one theme in agricultural circles on Wednesday, and in subsequent days of the week.

Lincoln is the champion Potato growing county; 71,575 acres being planted this year, and the largest proportion of these are grown in South Lincolnshire. To this district, therefore, the question of great moment is: Which is the safest, soundest, and most profitable Potato to grow? The more discussion and experiment we have, the more likely are Potato growers to secure a satisfactory answer to their inquiry. ("The Lincolnshire, Boston, and Spalding Free Press.")



Hints to Exhibitors.

Exhibitors are deserving of much consideration at the hands of officials, as they are really those who make a show what it is—good or bad. Exhibitors are in some instances far too grasping, they attempt to compete at too many shows and in too many classes, and thus reduce the standard of quality in an exhibition and their own reputation as well. There are many who prefer several third prizes to one first, even in minor classes, if the amount in prize money exceeds for the thirds that of a single premier award by a few shillings. Some exhibitors think little of being beaten, but such is not the spirit that should dominate the heart of an exhibitor. It cannot but be displeasing to employers to find their name placed behind that of another exhibitor with far less facilities for producing superior exhibits. The aim of all exhibitors should be to strenuously gain first prizes, restricting the number of entries at one show to gain that object.

I have seen men adopt the shifting tactics at an exhibition (when they saw their opponents' blooms staged) in such a manner as to spread their chance of winning prizes over a larger area until they had to be content with the winning of one single first, and acknowledging themselves content with numerous inferior awards.

Exhibitors are solely responsible for the class of bloom exhibited. It is pleasing to note that there is not nearly the tendency nowadays to stage blooms remarkable for their size in diameter that was the case but a few years since. Exhibitors now more readily grasp the requirements of the present day taste. Blooms remarkable only for inches in diameter and poor colour in petal are not what are sought after. Such as these are the result of "taking" buds formed too early for the variety, and which are coarse and objectionable in every way.

Exhibitors quite inexperienced would do well during the coming season to select their blooms quite on a different basis. A bloom large in diameter if accompanied by other attributes, such as depth, evenness of contour, solidity of petal, brilliancy of colour, combined as this latter is with freshness, are all superior features; then size in diameter is an important item.

Varieties, too, that have reflexing florets of a semi-drooping character, with well filled centres, are the type of Japanese specimens to aim at. We do not wish to see through the florets on to the stands or vases when looking down upon an exhibit; we require greater density. Exhibitors of experience know quite well that blooms of the character I note always obtain more points in close competition than those of an opposite "build."

Many visitors to shows think the neatly staged Japanese blooms, or even the curled drooping forms, are all "dressed" by the aid of curling tongs or tweezers. Those of experience know quite to the contrary. A perfectly developed Japanese bloom does not require any manipulation of its florets, let alone "dressing," as is understood by the inexperienced.

In the case of incurved kinds I note in some districts there is too strong a tendency to favour large flat blooms if they have broad florets, in preference to those more globose. The true typical incurved bloom is likened to a globe, and as such should be borne in mind when staging. Cross-eyed flowers and others with reflexed florets, especially at the base, as is the case in many present-day varieties, should always be avoided. A medium-sized, perfectly formed bloom is always preferred to a large coarse example, for the reason that such a specimen lacks but one point—size—whereas the other contains only this one feature.

In Chrysanthemum culture, as in all matters appertaining to exhibits of horticulture, quality should rank foremost. I think even now there is a growing tendency amongst prominent exhibitors to staging blooms but partly opened, many, indeed, requiring quite a week to give them the necessary finish. In the Japanese section this is especially the case. At this stage I would point out to such an exhibitor what are the duties of a judge in such an instance. It is obviously the duty of these officials to take into consideration what is the state of the exhibits upon the day appointed. He has nothing to do with what they will be or in what condition such exhibits were. The appointed day is in his mind, or ought to be. If due weight were not given to an exhibitor who conforms to this rule, what

would be the encouragement to an exhibitor who "times" his blooms to a day?

This latter is not the least simple phase of Chrysanthemum culture for exhibition. Fully developed blooms will always add a point or two over those not so, presuming, of course, all other points are perfect.—E. MOLYNEUX.

(To be continued.)

Cuttings.

Notwithstanding the knowledge of this plant now obtained by almost everyone who takes an interest in flowers, failures to root the cuttings are quite common. This, to our thinking, is due entirely to coddling. I have known gardeners who are not satisfied unless they are constantly sprinkling water on them, and are afraid to see the leaves flag in the least.

The newer varieties have especial care in this respect, and are consequently lost, the dealer being then abused for supplying bad cuttings. I think we might learn something from the dealers in rooting Chrysanthemums. For them it is an exception to lose a single cutting. Give them a tiny sprig of growth with one or more leaves, and in three weeks or so it is turned into a fresh-looking, growing plant. In their case there is no especial mixture of soil; the cuttings are simply dibbled thickly in shallow boxes filled with ordinary potting mould. They are thoroughly soaked, and the boxes put in any glass structure where frost is kept out. They do not receive daily sprinklings, but are allowed to droop their leaves, if we get sun, and are again watered when the earth requires it. In due time a gradual lifting of the leaves is noticed, and then neither sun nor air will cause them to droop again.

Instead of this we find sturdy little plants, with roots attached, and ready to pot singly into small pots. To those who grow the plants for sale propagating is a simple matter. But we find such artificial means employed in many places where Chrysanthemums are grown with care for show purposes that there is little wonder a bad start is made. In the first place, a closed box must be had, the top, of course, of glass. These are placed inside other glass structures. Then cocoa-fibre must be employed to plunge the pots, each one containing a cutting. Then the daily sprinkling, wiping moisture from the glass, and so on. In the end a goodly percentage are lost through damp, and those that do root are drawn up and weakly.

I would advise more rational methods with a hardy, easily grown subject. Treat Chrysanthemum cuttings as we manage *Caleolaria* cuttings, for instance; that is, dibble them in soil in an ordinary frame, where frost may be kept out; then failures would be very rare indeed.—H. S.

"The Family of Composites."

This autumn session of the Birmingham Gardeners' Association began on the 5th inst., by the presidential address of Prof. Wm. Hillhouse, of the University, Birmingham. The subject of his dissertation was "A Few Botanical Members of the Family of Composites." Illustrations were afforded by the fine display of Dahlias and early flowering Chrysanthemums staged in the lecture room of the Athletic Institute. The professor dealt with the subject in his usual familiar and entertaining manner, abjuring as much as possible scientific terminology. Allusion was also made to the fact that out of the about eight hundred groups in the family of Composites, only about ten per cent. afford medicinal properties. The lecture was listened to with wrapt attention, followed by an interesting discussion, in which Messrs. W. Spinks, Walter Jones, R. C. Bick, W. Gardiner, and R. J. Hamill took part. There were two or three new members elected, including Mr. T. Humphreys, the new curator the Botanical Gardens, Edgbaston. In response to the offer of prizes for Dahlias and Chrysanthemums arranged for effect, there was a very good competition, and also non-competitive groups, the winners being respectively for Dahlias: Messrs. W. Mason and G. Stacey; for Chrysanthemums, Messrs. T. Sceany, J. Sceany, and W. Hiron. A first class certificate was awarded to Messrs. W. H. Simpson, nurserymen, Birmingham, for a fine assortment of Chrysanthemums; and certificates of merit to Mr. R. J. Hamill, manager of The Vineries, Acceks Green, for a fine collection of Cactus and pompon Dahlias.

CROSS-BREEDING: THE EARLIEST EXPERIMENT.—It is an interesting point that the first experiment in cross-breeding was performed upon the common Pink. This was just two centuries ago. Fairchild was the experimenter, and the result was a perfect success.

AN "ORCHID DAY."—Some of the followers of Mr. Chamberlain have suggested the formation of an "Orchid Day," on the lines of the "Primrose Day," in honour of the politician's favourite race of flowers. *Cypripediums*, *Odontoglossums*, or *Dendrobiums* might be suggested, if the proposal becomes serious.

NOTES & NOTICES

School Teachers and Horticulture.

The Royal Horticultural Society has, in response to requests, decided to hold an examination exclusively for school teachers in cottage and allotment gardening. June is the month fixed for the examination.

Course of Lectures on Advanced Botany.

During the first term of the University of London Session (1903-4) a course of eight lectures on "The Relation of the Composition of the Plant to the Soil in which it Grows" will be given by A. D. Hall, M.A., Director of the Rothamstead Experimental Station, at the Chelsea Physic Garden. The lectures will be given on Tuesdays, at 3 p.m.

Lecture on Chrysanthemums at Peckham Public Hall.

A lecture on Chrysanthemums will be given by Mr. Edwin Molyneux, under the auspices of the Dulwich and North Peckham Chrysanthemum Societies, on Wednesday, October 21, 1903, the chair to be taken by Mr. C. H. Curtis, at 8 p.m. The annual exhibitions of above societies will be held as follows:—Dulwich: At the Baths, Goose Green, S.E., November 4 and 5. Peckham: At the Baths, Church Street, S.E., November 11 to 13.

Croydon Gardeners.

Mr. Joseph Cheal, of Crawley, at the latest meeting of the Croydon Gardeners' Society, lectured on his tour in the U.S.A. and Canada, illustrated with lantern views. Meritorious exhibits were contributed by the President, Mr. Frank Lloyd, Coombe House, whose head gardener, Mr. M. E. Mills, staged a collection of cut blooms of bush Chrysanthemums, Anemones, and the *Magnolia grandiflora*, and from Mr. J. R. Ball, head gardener to Mr. A. D. Klaber, Norhyrst, South Norwood, came cut blooms of *Salvia* "Red Dragon" and a seedling *Helianthus*. The next meeting will be on Tuesday week, when "A Year's Work in the Vinery" will be the subject from Mr. W. Taylor, Tewkesbury Lodge Gardens, Forest Hill, S.E.

Uncut Corn at Hamilton, N.B.

A correspondent writes:—"We have been getting our share of wet weather of late here. Monday, Tuesday, Wednesday, and Thursday of last week rained almost continuously. To-day (Saturday) is simply a treat. After 3deg or 4deg of frost last night the sun has come out in its most brilliant attire, which, I am afraid, presages a somewhat stiffer frost again to-night. Farming affairs are not specially comforting, especially where much of the crop is still ungathered. This is a late locality, and much of the Corn and Wheat remains on the fields—some uncut. Potatoes are showing marked symptoms of *Phytophthora*. Turnip and field Cabbages, though not so good as usual, are considered favourable."

"The Orchid Hunt."

As the old Gaiety Theatre crumbles and disappears beneath the ant-like persistence of the housebreakers, the new Gaiety just opposite has quickly grown up to the public view, and is outwardly a completed edifice. It will soon be opened, and in the story that forms the basis of the plot of "The Orchid Hunt," now being rehearsed as the first piece for the new theatre, an Orchid will lead to complications as varied, if not so serious, as those that followed the missing letter in "A Scrap of Paper." The opening act is laid in Kew Gardens, where a school for the study of the history and cultivation of Orchids is in session. The rivalry of two amateur cultivators of Orchids—a great English statesman and the French Minister for Foreign Affairs—leads to a wager as to which of them shall secure the most perfect specimen of a certain plant. Collectors are sent to Peru to search for something of great beauty, and fortune appears to favour England, until the wiles of a pretty French girl secure the prize. With this she lands at Nice, where the second Act takes place. In the end, however, a humble and amusing English gardener—to be impersonated by Mr. Edmund Payne—produces a still finer specimen that he has quietly grown at Kew!—"Daily Mail."

The Potato Crop—and Manuring.

We commend to the notice of all our readers, but particularly to those who are vegetable growers, the remarks conveyed on the Farm page in this week's issue.

Retirement of Mr. J. McIndoe.

It is announced that in consequence of the death of Sir Joseph Pease, Bart., and the sale of Hutton Hall estate, the well known head gardener is shortly retiring from active service there, where he has been for nearly thirty years.

A Correction.

In the paragraph on page 331, referring to the appointment of Mr. Robert Hay as head gardener at Hopctown House, a line was inadvertently transposed after the page had passed the editor's hands. The sentence beginning: "The head gardener having been," should have continued: "Laid aside for several months, it more and more fell to Mr. Hay," and so on, as the paragraph thereafter reads.

The Journal's Rose Analysis.

This important analysis of exhibition and garden Roses will be presented (unless anything very unforeseen should occur) in our issue of October 29, the last in the present month. It will thus be in good time, especially in this late season, for intending planters to make selections by its guidance. As there is usually a great demand for the Rose edition, it would be advisable on the part of readers to make sure of a copy by timely notification to their newsagent.

The Horticultural Club.

The usual monthly meetings of this Club at the Hotel Windsor were resumed on Tuesday, the 13th inst., after the customary vacation interval, and subsequently to the house dinner, under the genial presidency of Mr. Harry Veitch, a most interesting lecture was given by Mr. Charles E. Pearson, entitled, "Bird-Nesting in Russian Lapland." The lecture was illustrated by beautiful lantern slides, prepared from photographs. Of the lecture, we hope to report more fully in our next.

Liverpool Horticultural Society.

The above society is unable to secure St. George's Hall for their annual Chrysanthemum show, and have therefore decided to hold it in the Drill Hall of the 4th Liverpool Volunteer Artillery. The Drill Hall is situated opposite the Botanical Garden, in Botanic Road, and is a large and commodious building, in every way suitable for a floral display. It is also within easy distance from all the tram routes, and Edge Hill Station. Numerous entries are already registered, and there is every prospect of having a grand show of the Autumn Queen.—J. S.

United Horticultural Benefit and Provident Society.

The monthly committee meeting of this society was held at the Caledonian Hotel, Adelphi Terrace, on Monday evening last. Mr. Charles H. Curtis presided. Four new members were elected and one nominated. The death certificate of two deceased members (Mr. John King and Mr. J. M. Young) were produced, and cheques were granted to their nominees for the amount standing to their credit in the society's books, being £48 3s. 1d. and £17 9s. 4d. respectively. Seven members were reported on the sick fund. Members and friends requiring tickets for the annual dinner on the 27th inst., will please send to the secretary for them as early as possible. His address is 9, Martindale Road, Balham, S.W.

A Japanese Nurseryman's Catalogue.

On Monday last we received as quaint and beautiful a catalogue as ever we have seen. It came from Japan, from L. Boehmer and Co., 5 and 28, Bluff, Yokohama. The paper is of thick texture, and cream coloured. Each page has a coloured illustration, the subjects being *Liliums*, species of *Prunus*, *Viburnums*, dwarfed trees, Japanese gardens, and scenes at Japanese flower shows with the dainty little ladies holding their long loose robes, and showing their tiny feet; views of Bamboo masses, Roses, Camellias, Wistarias, Irises, Magnolias, Chrysanthemums, and other lovely Oriental flowers. The text or reading matter (all in English) is run in and out amongst these pictorial illustrations, and the catalogue is more like a book on the flowers and trees of Japan, than what it merely aspires to. The lover of Japanese seedling and bulbous plants will certainly find this a very interesting publication.

Chilworth Manor, Romsey, Hampshire.

Being the combination of a cyclist, camera-"fiend," and enthusiastic horticulturist, I was tempted by the recollection of some fine fruit exhibited at the Bath Show last August, and reproduced in the *Journal*, to pay a visit to Mr. Mitchell, gardener to J. E. A. Willis-Fleming, Esq., at Chilworth Manor, near Romsey.

Leaving Southampton some miles below, the road takes you by gradual ascents to the top of a ridge of hills, from which some magnificent views of the surrounding country may be obtained. Then on through large tracts of woody districts, interspersed with stretches of Heather in full bloom, and the large green fronds of the Bracken Fern shimmering in the wind, catching the rays of the sun, and looking like a sea of purple and green; while ever and anon a rabbit skips across the road right in front of the bicycle. Such was the seductive scene continually presented to me, until, after above seven miles riding, I arrived at the entrance to the Manor drive, with its curious thatched beehive lodges and well kept Laurel arch.

The Manor is a long rambling building (which is shortly to be pulled down and replaced by a more modern mansion), and stands surrounded by over 120 acres of park, lawn, and gardens. It is approached by a long drive, while on either side is the wild garden, with gigantic Firs and Cedars towering high overhead.

Skirting the side of the house is a large and well kept sloping lawn. At the base of this there is a broad gravel path, fashioned on the antique style, with large ornamental stands at intervals on either side, and at every 20yds there are a series of steps. At the bottom of these is an ornamental fountain, with golden carp swimming in and out among the Water Lilies; while further on one notes a series of rustic arches, covered with rambling and other Roses, completing a picture which is not met with every day.

From the lawn a splendid panorama is unfolded to the visitor. Some ten to fifteen miles of scenery is visible to the naked eye.

Leaving the house, we reach the kitchen garden by a series of rustic paths and arches. Here the same neatness and order is to be found, as in every part of the garden; while some of the vegetables are champions of their kind. Fruit, in the shape of Apples, Pears, Plums, and Currants, as elsewhere, are conspicuous by their scanty yielding. Turning to the right, we enter the Peach and Nectarine house; and by the aid of a friendly hand barrow I am enabled to reproduce a photograph of the Peach Dymond, as grown by Mr. Mitchell. As will be seen from the illustration (page 357), the trees are so pruned that the fruit has every chance to grow to the top, thus enabling them to catch the light which gives them their rich colour.

Passing through a turning in the garden, it is with feelings akin to awe that I enter the large vinery, and Mr.

Mitchell displays with just pride the magnificent specimens of his cultural skill. The hanging bunches are large, well shaped, and well coloured, some of the berries being as large as small Plums. The chief varieties are Muscat of Alexandria, Gros Maroc, and Madresfield Court. I essayed a photo of a bunch of Gros Maroc on the Vine, but owing to the light and the difficult position of it, the result was not good enough for reproduction. A large Peach tree, covered with luscious, well shaped, and coloured Sea Eagle fruits, much to my regret I was unable to photograph, owing to the position of the fruit.

The Fig tree walk, extending over 100yds, is worthy of mention; but the early frost played havoc with the fruit, so the crop is naturally small. The Begonia house, with Ferns and Palms, also reflects great credit upon the grower. In conversation I learnt that Mr. Mitchell has filled the position of head gardener for over twenty years, and during this period he has won numerous awards at the Crystal

Palace, Bath, and other places noted for large fruit shows. I understand that he is exhibiting shortly at several shows, and, without wishing to unduly alarm any of your readers, I warn them to beware, for the veteran fruit grower at Chilworth has something "up his sleeve" in the shape of Grapes, Nectarines, and Peaches [August].

A very pleasant afternoon finished, I quietly cycled back to Southampton, my enthusiasm being roused to a greater pitch by the all-round display of cultural skill it had been my good fortune to inspect.—E. E. R.



Front view of house and lawn.

HAMPSHIRE. — This southern county has a surface of 1,112,000

acres, considerably varied in character of surface, yet without high hills. The Isle of Wight is a detached portion, remarkable for its beauty and fertility; the Downs, a chalky range, were at one time quite bare of timber. The New Forest and Bere Forest occupy large tracts near Southampton; while on the borders of Dorsetshire there are large tracts of heath, and on the seashore extensive marshes.—(From "Loudon.")

THE GREEN ROSE.—This Rose, with its curious blooms, was introduced as long ago as 1856 by Messrs. Guillot and Clement, of Lyons, France, under the name of Rosa viridiflora. It was also cultivated in England about the same time under the name of Rose Bengale Vert. It is still catalogued by Melbourne and English nurserymen under the name of R. viridiflora, and when grown on poor soils is a very interesting object.

PORTRAITS OF BOTANISTS.—Dr. Wittrock, of Stockholm (observes the "Gardener's Chronicle"), has prepared a catalogue of the extensive collection of portraits of botanists contained in the library of the Botanic Garden, Stockholm. Of many of them reproductions are given. Brief biographical details are also supplied, so that the publication is one of much interest to botanists. The text is in Swedish, but Latin summaries are added for the benefit of those not conversant with the Scandinavian tongue.

Combination Bedding.

In the battle of the bedding, or, rather, those quiet conflicts 'twixt architect and gardener, in which the former has by classic design imposed the penalty of formal gardening and brought a biennial strain upon the latter in carrying all out "decently and in order," we have a contentious question it is not purposed to thrash out now. Sufficient to say that an expanding wave, and a potent one, too, has of late years swept over gardening England, and the old order of garish formality gives place to the new one of graceful freedom.

However, as many cannot shake themselves entirely free of the fetters of formality without some danger of running amuck amongst the classic outlines by which they may be environed, they would fain seek relief from the laborious luxuriance and ultra extravagance entailed by constant cropping with tender plants of delicate grace.

Never more than during the present season, perhaps, has the wisdom of employing plants better suited to our fickle climate been exemplified, and possibly, too, such seasons may breed thoughts in the minds of not a few that such of our stately homes as are planned on the noble Italian style are better adapted to the sunny south than to the cloudy skies of Old England. However that may be, it cannot but be admitted that the informal, many-gabled, picturesque mansion has not only a charm peculiarly its own, but readily lends itself to the new gospel—if it is new—of freedom and grace at the gardener's hands, besides providing sunny nooks and sheltered angles for such tender subjects as he may still have a lingering regard for.

Happy is the man so situated, and whose artistic soul breathes in the deep beauty of such scenes until his inspired hand grasps to the full its many opportunities. But it is for less fortunate brothers who have to wrestle with Nature on a wind-swept terrace plateau where Sir Architect has dumped down his massive Italian mansion, and carried far out, may be, into the grounds those severely geometrical lines to harmonise with it, which, of course, they do, and which perforce nothing else does, who is to be sympathised with. It is a bad job, some may say (some have said), but it cannot be altered. Yet, probably, the labour can be lessened, and the burden of

"that blessed bedding" be considerably lightened; and although easement cannot be made to go the whole way, it can be made to go considerably further than at first sight may appear to be either prudent or possible. We cannot altogether hope to have Mr. Robinson's ideals copied everywhere, literally, though that might save labour. But

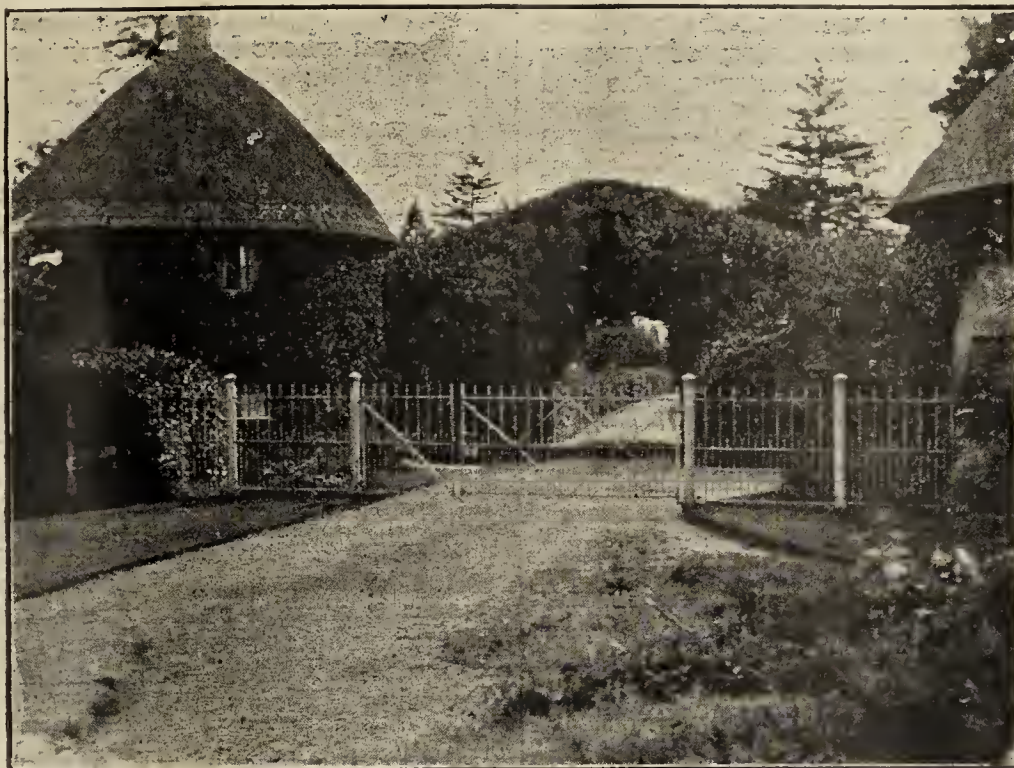
in the first place, fortunately, well kept lawns, so inseparably interwoven with the characteristic of English gardening, and English climate, too, are not only prominently pleasing features, but sufficient in themselves to soften and tone down much that would otherwise be past redemption, so far as artistic gardening is concerned. By the way, how pre-eminently the passing season has suited the greensward! Too often this *pièce de résistance* suffered severely in the craze for cutting and carving out a multiplicity of beds, and it has been noticed that where, during the abatement of the bedding fever, half the beds have been turfed over, results have

been distinctly advantageous so far as appearance is concerned, not to mention the relief gained by a fifty per cent. reduction in the bedding stock. Not only on the grass, but where geometrical designs have been formed by Box-bordered beds on gravel nothing has suffered by turfing over a number of beds and leaving designs intact; in fact, in this particular case, a more pleasing effect is gained, as well as relief in two senses, by the interpolation of grassy greenery. On the score of economy, men who are at their wit's end to

make both ends meet might well consider the desirability at this timely season of calling the attention of the powers that be to this matter, and of pressing the point too.

In direct relation to our text is the bedding of the formal garden, well furnished beds being the desideratum, be they many or few, and any relaxation of the biennial strain imposed by spring and summer bedding without sacrificing effect would be welcomed for the more economical considerations are felt the less desire there is to show them. Tangly growths and many mixtures are out of place in the formal garden. Pruness and trimness,

however much they may be abominated by the disciples of natural freedom, must more or less prevail, but there is no reason why the slavish devices of carpet bedders should be adhered to. At the season, now at hand, for planting the spring display, much can be done to lighten the labour of



Entrance to the drive.



View looking from the lawn.

next summer's bedding by the free use of low growing, hardy plants to eventually hold a practically permanent position. In saying that some of these favoured by personal experience are but of the common order of their kind, it is anticipated that the greater spirit of toleration now in evidence will admit them to the list, instead of blackballing them out of it. Some of the finest effects in spring gardening are to be gained by their use.

The first consideration may be given to long borders, which often bound the formal garden and bear the odium of "swallowing up a lot of stuff." These being of varying length and width, no rigid lines for filling them can be laid down here. In planting now, the future must be kept well in view: edging or divisional lines or bands of the perennial plants employed, being considered as permanent future difficulties, will be avoided. Obviously suggestions only can be given, for the subject is very elastic. As an example of what may be done with a long border, now cleared of its summer occupants and prepared to receive the spring bedders, this may be crossed diagonally with lines of London Pride and re-crossed in the opposing direction, thus forming square or diamond shaped panels, according to the angle at which the lines are drawn. This pattern, again, can be formed inside an edging of the same plant, and formed, if desired, to leave small triangular marginal spaces for, say, *Violas* now and *Lobelia* next season. We thus have a number of central panels admirably adapted for filling in with Forget-me-not, Wallflowers, or other spring bloomers. London Pride and blue Forget-me-not form, when in flower, a charming combination of colour, coming as a revelation to those who have not hitherto seen it.

The same combination can be carried out in oval, square, or circular patterns, all of which form panels eminently suited for filling in now, and with summer bedders in their turn. Where bedding is done on an extensive scale bright-coloured, hardy, foliaged shrubs, such as the gold and silver leaved *Euonymuses*, which can be kept low by pegging down, are valuable for making some of the panels permanent: one plant which commends itself in particular for this purpose is *Veronica cupressoides*, quite a gem in its way. London Pride, amongst the lowly, only has been mentioned, but other *Saxifragas*, including *S. Wallacei*, are good for the purposes, as are *Campanula pumila* in its blue and white varieties; red and white *Armeria* (Sea Pinks, or Thrift); *Alyssum saxatile*; the *Cerastiums*, where they stand the winter well; *Veronica incana*, and some of the *Sedums*. The latter, however, are not so amenable to control, and too dwarf to give the bold framework generally required to set off the legitimate croppers, yet may well find a place in filling some of the front panels.

Bold edgings to large beds of plain design, round, oval, or square, can be readily found in the list mentioned, and with plenty of space and a little ingenuity crude outlines can be broken up by chain, half circle, or other patterns, as taste may dictate or material provide for. For our largest round beds *Alyssum saxatile* is much esteemed as an edging, and the filling in with Ruby Gem Wallflower, which will shortly take place, is remarkably effective in spring, when both are in bloom. Year-old seedling plants of this *Alyssum* are best for the purpose, as the plant is a bad lifter, but when once established a massive permanent edging results, which will hold its own for years, the silvery-grey compact foliage during summer forming a pleasing foil to the glare of scarlet *Geraniums* or tuberous *Begonias*.

Much more might indeed be said of the many ways in which these useful hardy plants can be employed as permanent bedders, but, probably, sufficient has been shown of the all round benefits to be derived from combination bedding. Such things as advocated when once planted grow apace, and ample stock is always to hand for replanting, although they are quite amenable to keeping within bounds by annual trimming. Summer, of course, finds them flowerless, yet there is a quiet beauty in the various greens and soft greys which rather adds to than detracts from the short-lived brilliance of the tender things.

Such doctrine, undoubtedly, is rank heresy to the orthodox bedder, but there are not wanting signs of the times to show that the orthodox bedder is likely, sooner or later, to become as extinct as the Dodo, and all that is advanced here is a compromise between his faith and that free thought which would relegate the scarlet *Geranium*, tuberous *Begonia*, and all the tender tribe to oblivion, leaving an opening in the formal garden for an incongruous mixture of rampant perennials to clash with classic outlines.—QUIZ.

The Modest Violas.

When recently at Edinburgh I made a journey to Pilrig to see the veteran James Grieve, the originator of the race of bedding *Violas* grown in the present day. Here, in the occupation of some ten acres of the old Pilrig nurseries of Messrs. Dicksons & Co., Mr. James Grieve and two of his sons have a nursery where many things are grown for sale, but in which the *Violas* and the *Pansies* play a very important part, and where large quantities of both are grown.

VIOLA HYBRIDISATION.

It was in 1862 that James Grieve, then with Messrs. Dicksons and Co., commenced the cross fertilisation of such species of *Violas* as *lutea*, *stricta*, *stricta alba*, *cornuta* and others, and commenced the group of small-flowered, free-blooming varieties which have become so useful in gardens, for it is as a garden plant that the *Viola* has its widest scope of usefulness. One aspect of *Viola* culture at this nursery which had great interest for me as an old raiser was the large proportion of old standard varieties being grown for bedding purposes, and this not from any lack of novelties, but because so many of the new varieties which have been sent out in recent years were put forward as exhibition flowers, with the unfortunate result that much rubbish, from the flower garden point of view, has been put upon the market, and some of the new Midland varieties in particular came in for condemnation by Mr. Grieve, jun. The exhibition of *Violas* is carried on only in a very restricted degree, while huge quantities are employed for garden decoration.

I was at Redbraes early in May, and the most precocious flowering *Violas* were Redbraes Yellow, a very dwarf, compact growing, rayless variety, excellent in colour, and remarkably free; White Perfection, an old variety, with long footstalks to the blooms, which makes it extremely useful for cutting purposes; William Niel, the best of its peculiar shade of rose colour here; Walter Welsh, a fine yellow, with rather dark rays, good grower, a little tall in growth, makes a good back row to a ribbon border of *Violas*; Lark, creamy white, edged with heliotrope; Lizzie Paul, a good bright yellow, very like Bullion; Mrs. Charles Douglas, a somewhat large but useful yellow self; Pembroke, a soft yellow of good habit; Primrose Dame, in the same way, but of a rather paler shade; Sunset, a pretty *Viola*, top petals rosy lilac, lower primrose yellow; William Haig, which is regarded as a slight improvement upon Archie Grant; Canary, pale yellow flowers of good quality, but a strong grower, has a Picotee edge of white in summer; and Marchioness, which is considered by Mr. Grieve as the best white *Viola*. The foregoing represented the earliest to bloom in the collection, and that in a somewhat cold district, and they may be accepted as being valuable for spring bedding.

THE NEWER VIOLAS.

Among the newer *Violas* was Royal Scot; this is a seedling of Mr. Grieve's, and it is an improvement upon True Blue, and the latter, though raised many years ago, is still one of the best blue bedding *Violas* in cultivation. The flowers are rather larger than those of True Blue, of a clear colour, with a white and yellow eye. Grievei Improved is, as its name implies, an improvement upon Grievei, raised some forty years ago, the old form still a most useful bedder. Sulphurea makes a good bedder, being dwarf and very free of bloom, it is thin in substance, and suffers in wet weather. Pilrig Park, white, has a fine constitution, though it is quite thirty years old; Pencaitland is also an excellent bedding white, very free, and pleasantly sweet scented; Mrs. J. B. Stewart is a light variety edged with blue; Councillor Watters is a deep blue purple with a flush of crimson, good shape and stiff flower stems; J. B. Riding still stands somewhat alone for its peculiar shade of colour; King of Crimsons is in the same way. The old Lilacina is an old variety with some individuality of character, and makes an excellent bedder. Duchess of Sutherland is of a very pleasing pale lilac tint, and is found very useful for bouquet work; Blue Gown is acceptable in colour, but its constitution being feeble it cannot be depended upon as a bedder; Blue Duchess, pale blue, is thought to be a sport from White Duchess, which it greatly resembles in habit; Acushla is distinct in character, and desirable as a bedder; Countess of Kintore is still one of the best of the blotched varieties, but in this moist part of the country stands badly during summer.

Ariel, delicate mauve, is very pleasing, and it makes a delightful bedder; Tom Wilson is a deep coloured William Niel; Sir John is a rather large lilac-tinted variety. The old Blue Bell is also grown in quantity and much appreciated; and Mrs. C. Turner, of many years' standing, one of the best clarets.

At the Redbraes Nursery the Viola plants are put out in cold frames in autumn, but there is no glass covering to them; all the protection they receive is a few faggots placed over the frames in stormy weather. Grown under such conditions the plants are of the hardiest character, and are moved from the frames with good balls of roots.

Pansies, both Show and Fancy, are largely grown; so are Phloxes and Pentstemons, and many other subjects in which the Scotch florists take delight. A large quantity of a scarlet Dianthus belonging to the Mule type is to be seen which makes an excellent summer bedding plant. Soft-wooded florists' flowers and bedding stuff in enormous quantities are grown. A visit in July and August to the Redbraes Nursery should be one of an interesting and instructive character.—R. DEAN.

Fuels for the Garden.

The following are the conclusions given at the end of a long paper read recently before the American Florists' Convention at Milwaukee:

That coal is the cheapest and best fuel that the market affords, 11b under ordinary conditions evaporating about 7½lb of water at 212deg F. That the provision for a liberal reserve supply of coal is, under most circumstances, the safest method of providing for an emergency. This supply need not be stored near the boilers, and should only be used when coal cannot be secured from the regular sources. The interest on the money invested in such reserve supply of coal will be wisely expended. That 11b of dry wood will evaporate about 4lbs to 7lbs of water at 212deg F. That wood is in many cases the most efficient substitute for coal during a short period. That where crude oil can be secured at a reasonable price it is the best and most reliable substitute for coal, and where it can be purchased as low as 4s. 2d. per barrel it is preferable to coal at 3.50dol* and upward per ton. That 11b of crude oil will evaporate 13.3lb of water at 212deg F., and that 11b of oil has a heating efficiency equal to that of about 1.6lb of coal. Also that the use of oil is clean and economical so far as the fire-room work is concerned, and if properly burned no smoke is produced.

That the mechanical part of oil burning has passed the first experimental stage and has proved successful. That there are a number of good burners upon the market, especially of the sprayer class, using compressed air or steam for volatilising the oil. That a cheap and efficient burner can be made from comparatively inexpensive materials. That oil can be burned in an even and effective manner, especially under steam boilers of the water-tube class. That petroleum will probably never replace coal for general use. In the discussion, it was stated that garbage was being used by some cities as fuel. The efficiency and adaptability of natural gas as a fuel for green-houses was emphasised by various speakers.

RASPBERRIES AT BLAIRGOWRIE.—Raspberry growers near Blairgowrie, N.B., have sent away 1,400 tons of fruit this year, realising, according to the "Sun," £50,000.

Bath Botanic Garden.

The Bath Botanic Garden is situated within the public park—the Victoria Public Gardens. It is purely an open-air garden, for the culture of the lesser-known hardy shrubs and plants; and is superintended by Mr. Milburn, who, indeed, made the place. His first work there was enough to test the courage of any gardener, much less a recruit fresh from Royal Kew, for the ground had been the town toom, and all sorts of foreign material, quite impossible to use for good gardening, was found. But the garden is now grown up, and orderly. The late Mr. D. T. Fish, on his first visit to Victoria Park, was very greatly charmed with its beautiful aspects, and did not stint his pen of praise when he came to write its description for his paper.

At the north side of the Botanic Garden there is a small bog area. Here are such handsome plants as the purple variety of New Zealand Flax, also *Cytisus purpureus* or purple Broom. *Rodgersia podophylla* is always noble by the side of water, just as the Gunneras are; and the Spiral Rush (*Juncus effusus spiralis*) is quaint, and helps the general effect. Amongst dwarfier plants one cannot omit the double flowering *Cardamine pratensis*, which equals the double white *Arabis*. The Wood Lilies or *Trilliums* come under this head, and the *Tiarella* furnishes showy masses of its spiky flowers. Behind this place of bog plants the curator has planted a fringe of the hardier Bamboos, including the bold-leaved *Bambusa palmata*, the graceful, black-stemmed *Phyllostachys nigra*, the moderately dwarf growing *P. Fortunei variegata*, and *P. violascens*. Others are there, of course, but these were specially noted, as also the *Arundos* and the graceful *Reeds*.

Here and there one could see the plump, fat growths of the King of Lilies, *Lilium giganteum*, which gives such a gardenesque touch to any plantation of shrubs and flowers. *Eremuri*, with their rigid, stately spikes, severe, dignified, imposing; they, too, were here; and then we wander to the rock garden, where that gem of tiny foliage plants shows its chocolate-toned, burnished leaves—the *Shortia galacifolia*. It grows high up amidst Alpine snows, yet it also thrives in the placid air of beautiful Bath.

But ere we pass to the alpine collection a notice board catches the eye, and here we see a list of the rarer or most interesting plants that at the moment are to be found in flower; and we learn that this list is supplied constantly for the subscribers' benefit, by the curator. It is useful, and might be followed



Peaches as grown at Chilworth Manor.

with advantage elsewhere.

In the rockery itself, the bold spreading masses of *Phlox subulata* recall their charms even now, and I am writing six months after my visit to Bath. That is the way to grow the alpine. *Phloxes*, whose spreading growths are healthiest when they are free to wander. And observe at the distant effect, as well as the charm at closeness; and as with *Phloxes*, so with a hundred other things that are the delight of flower lovers in every land.

The sweetly odorous *Daphne Cneorum*, not always successfully cultivated, however, was flourishing here in rude luxuriance, and made a feast of pale pink beauty. Given a few special needs, this lowly, beautiful plant well repays its owner, and it is the gardener's part to master his craft; to be able to nurse, doctor, and understand his patients; yet many act as though the objects under their care could metamorphose themselves into other and totally different characters, adapting their constitutions to conditions wholly antagonistic to those that Nature endows them with; yet all this for want of a little thought and study on the gardener's part.

As in all good rock gardens (and the Bath Botanic Garden, in this respect, is a fine model, as is Kew, and Birmingham, but not Edinburgh), there is a fairly liberal furnishing of suitable dwarf shrubs, like the mountain *Picea*, the nanus *Birch*, *Olearia Gun-niana*, *Cistus ladaniferus*, *Fabiana imbricata*, *Cotoneaster horizontalis*, *Cytisus albus*, and many more. These break up the evenness, if that, unfortunately, through bad construction, exists; and in any case they give height and breadth, act as foils and a

background, and give a certain amount of shelter against cutting and killing ground airs.

The alpine collection has a goodly selection of the true Geraniums or Cranesbills, which are handsome and showy plants for the midsummer display. *G. sylvestris* and *G. sanguineum*, *Endressi*, and *ibericum* are particularly bright, robust and free. Then, for the opener spaces that exist here and there at the base of the rockery there was a little known, though extremely neat and pretty *Calceolaria*, that sows itself annually, and is named *C. mexicana*. It is a wonder our park superintendents, who have much bedding to do, do not find a use for it. *Saxifraga granulata* fl. pl., though so common, is a very handsome and useful plant, and grand for odd chinks wherein it catches root and thrives.

Part of the Bath Botanic Garden rockery had but recently been renewed, and was planted with *Opuntias* and *Saxifragas*. These highly interesting, if grotesque, Cactaceous plants are tried by fits and starts. Keen, hardy plant gardeners, and curators of botanic gardens ever and again made collections, but in ordinary private gardens they do not "catch on" as subjects for the ornamental planter. Truth to tell, they are "miffy," and require this, that, and the other care until they get a hold, and even then they are always going off. Probably the finest outdoor collection of *Opuntias* and *Mammillarias* in this country is that to be seen on the west side of the Palm House at Royal Kew; there they are doing well. The Earl of Ilchester, at Holland House, has an assortment of kinds which he partly shelters by means of urn-like or semi-cavernous constructions made of boulders and flat stones.

To do the rock garden justice at Bath (or anywhere else), one must see it at its best in summer; but this western city (famous for its hot springs and the Roman remains of sumptuous baths and aquariums) is to-day rich in exotic shrubs of ornamental merit, and comprise the list I give herewith. *Solanum crispum* is one, and a handsome fellow too, though seen only once in a hundred gardens. The reason is undoubtedly its tenderness; but the pretty pale lavender clusters are really fine. The Bath specimen is the only one I know of growing as a bush in the open, and has made 8ft in height and as much in breadth. *Cæsalpina japonica* had suffered from the late frosts we had in the spring, but the fact of its having grown to a bush in the open spoke eloquently of the mildness of the Bath climate. When it flowers it is a gorgeous subject, the racemes being intense rich yellow. Its floraison, however, has to be patiently waited for in most cases, unless, perhaps, southwards. The *Aralia* (or *Fatsia*) *japonica* had evidently stood out for a number of winters, but this subject can even become accustomed to the "bitin' cauld" of Scottish winters and springs, so that it ought to exist in these gardens of the Queen of the West.

Raphiolepis ovata or Indian Hawthorn, has leathery, ovate, shining dark green leaves, is of shrubby, close habit, and bears sweetly scented white panicles of blossom. It is too seldom seen. Then there are the various fine Japanese Quinces, the *Cydonias*, now all put under the genus *Pyrus*, of which *P. Maulei* and *P. Cydonia*, and *P. Schiedeckeri* are three of the gems. And what ails one at *P. japonica*?—plant of many graces, and so useful. In *Griselinia lucida macrophylla* we find a good foliage shrub, in this respect resembling a hardy *Rhododendron*, but without the wealth of floral yield given by these unequalled subjects. The scashore *Griselinia*, to wit, *G. littoralis*, seems as hardy as most needs require, seeing that robust plants can be viewed in the Duthie Park at Aberdeen—a bleak city, swept by violent nor'-easters.

The Common or Hardy Orange—*Citrus aurantium*, otherwise *Egle sepiaria*, might be chosen by planters were it known to exist here, and, more than that, to sustain its life and limbs alway. No one would plant it for its ornamental properties; at least, I hardly think so, since its dark green trifoliate leaves on tortuous, prickly, slender stems, are all it affords for beauty's eye. But then a hardy Orange: there's history and romance in the name!

But a really beautiful shrub is *Azara microphylla*, possessing, first, vigour; second, grace of growth; third, an evergreen character; and with these its neat oval leaves, about the size of one's finger-nails, that shine like a newly-polished mirror. It usually attains six to eight feet, or more, given time and a proper place. Nor are the Palms wanting. The *Trachycarpus* (*Chamærops*) *excelsus* is doing well along with a choice of Maples (*Acers*) in a sheltered corner, and really this pretty Fan-Palm is very hardy. *Photinia serrulata*, the Chinese Hawthorn, whose showy red leaves give such a marked effect in the fore-front of a shrubbery, when they are young, is another plant of note at Bath. It is fifteen feet high; think of that!

In conclusion, one cannot, or would not, like to omit *Collutea cruenta*, *Olearia macrodonta*, *Lonicera Barleari* (seldom seen), *Sheppardia argentea*, *Hippophaë salicifolia*, *Pyrus salicifolia*, and the Judas Tree (*Cercis siliquastrum*).

The inscription on a quaint and pretty cross-piece dial here is:

The hours are round this cross; and while 'tis fine
The time is measured by a line.
But if the sky be clouded, mark, alas!
The hours not ruled by shadows from the cross.

—WANDERING WILLIE.



Tropæolum pentaphyllum—What Treatment?

Can any reader suggest a plan to ensure the breaking into growth of *Tropæolum pentaphyllum* early, for summer blossoming? I have grown it—a very favourite flower—for some years, and find it is more likely than not that tubers planted in March will not appear and grow off, till October. Messrs. Sutton and Sons, from whom I had my tubers, recommend taking up and keeping in dry sand for the winter. I have a specimen in bloom now, left in the ground all the winter, which broke into growth early; but of half a dozen fine tubers planted in March, several have now (about October 1) started, and are growing vigorously, too late to bloom before the frosts nip them. One winter I managed with mats, to protect sufficiently two specimens which bloomed magnificently the next summer. I have wondered if the reason of its behaviour in this manner is that in its natural habitat this is its season for growth?—J. TURNER, Kent.

Planting Season—The Falsity of Cheapness.

The seasonable article by "H. D." under this heading in last week's issue of the Journal (page 323) contains much of interest to intending planters. The remarks on cheap trees and cheap and unreliable labour should come home with some force to many people, and are well worth bearing in mind by all. Really good and properly prepared young trees are now produced at such a low rate by our leading firms that there is no excuse for anyone who chooses to pick up at a paltry figure the indifferent material too frequently met with in auction rooms. With all the information now available as to the merits and defects of varieties it is quite time that an end was made of planting inferior sorts.

To a certain extent I am also in accord with the writer's remarks as to planting in exposed positions, though these have their bad seasons as well as those occupying a lower level. One of the most successful fruit farms with which I am acquainted is situated in a hilly district of Surrey. Here, vale and hillside are fairly evenly balanced in proportions, and it frequently happens that though there may be a dearth in one portion, a heavy crop may be gathered from the differently exposed trees. One season it may be the low-lying land that fails, the next the high, but seldom is it that a general failure prevails.—PROVINCIAL.

Flavour in Fruits—A Quandary.

As a close reader of the dear old Journal, I sometimes observe anomalies, and the following excerpts from the issues of last week and the week previous, require explanation from the powers that be. The question comes home with increased interest at this moment, for I have been nursing hopes of trying the pot-culture of Apple trees. But I want to know that not only are "the Gascoigne's samples comforting to look at," I also want *flavour*. The quotations are these:

"The orchard house culture of Apples on a large scale is expensive, and though the size, colour, and beautiful appearance of the fruits are very comforting, the flavour is not quite equal to that of a cracked old Cox's from a scraggy orchard tree. This would seem to put a premium on 'scraggy orchard trees'; but when a man handles and eats a magnificent Peasgood's or Gascoigne's sample, he hesitates to complain if the flavour falls short of his expectations, as judged from the outside."—J. H. D., page 306, October 1.

"The orchard house fruit (at Chiswick) made up for any deficiencies in the outdoor section, and was superb. It mostly came from Messrs. Bunyard and Co., Maidstone, but it had a lesson to teach to wealthy garden owners, namely, that if they would have fine fruit irrespective of season, the line is to erect orchard houses and adopt this style of culture. It has been proved without doubt that the finest Apples and Pears can be grown in pots under glass, and in these days of great wealth it is the finest and the best that are needed for the tables of the affluent. Considering these facts, and also the uncertainty of the British climate, as experienced this year, it will not be surprising if there is a great extension of orchard house fruit culture in the future, and such displays as that recently seen at Chiswick can hardly fail to give impetus to the movement."—G. H. H., page 337, October 8.

Is flavour sacrificed for appearance, or not?—D. O. E.

Autumn Decorations.

At this season a wealth of artistic material lies to the hand of the decorator. Nature is in her most harmonious mood in the studies she gives in browns, and russet, and dull reds, mingled with the intense crimson of many berries. The multi-coloured tints in the fronds of the Bracken are simply enchanting, and the Traveller's Joy flings its long trails in a cloud of easy gracefulness. In hedgerow and woodland the artist may find much that is both useful and beautiful for room and table decoration. Let him leave the hothouse beauties and use these rustic wares while he may, for soon blustering gales will sweep away much of this dainty shading and toning. I wonder how many people have noticed the lovely hues taken on by the foliage of *Rosa rugosa* before falling? They are at times most delicate.—DECORATOR.

Potatoes: Northern Star, Evergood, and King Edward VII.

In reply to your correspondent, Mr. Yates (page 337), who inquires as to the merits of Northern Star Potato, I shall be glad to give my experience of it. In this particularly wet and sunless season it has yielded with me at the rate of 14 tons per acre. The sets were planted 3ft apart each way on April 24, on rather heavy land, not by any means ideal soil for Potatoes. The land had been previously well dressed with farmyard manure, about 20 tons per acre. [See Farm page this week.—Ed.] At the time of planting it received a mixture of bones, muriate of potash, and sulphate of ammonia at the rate, respectively, of 6cwt, 1cwt, and 1cwt per acre. When the Potatoes were hilled they had a top-dressing of the same quantity of muriate of potash and sulphate of ammonia. When I tell you our rainfall here for August and September amounted to 8.37in, and that the number of bad or doubtful Potatoes amounted to four tubers to the ten, I think Northern Star's disease-resisting capability speaks for itself.

"Evergood" was raised also by Mr. Findlay, but previous to Northern Star. It is a first-rate main crop, and seems to improve year by year, but it does not yield like its younger competitor. [According to the Spalding test, "Evergood" was the best cropper. See page 351.—Ed.] As to "Edward VII." a very large grower of it has lately offered to exchange 10 tons Edward VII. for 1 ton Northern Star. Comment is needless.—ALEX. M. WILSON, Bulb Grower, East Keal, Spilsby.

Last season I purchased 11lb of Northern Star from Alex. Dickson and Sons, Ltd., Belfast, for 10s. I had nine small sets which were divided and planted in the usual way, and left to grow as they might. I must confess to doubting that they would produce much, especially as they received a check, the tops being blackened by frost when about 6in above ground. A surprise awaited me when they were lifted, the yield being 77lb, which, I think, one may conclude is a splendid return. At present they are being offered from 3s. 6d. per lb and upwards, and I advise everyone desiring good value for their money to invest in the "Northern Star." From what I have seen of "Evergood" I conclude it is an equally good variety, and I shall plant a good quantity of these next season.—J. W. JONES, Knoekin, Oswestry.

Results so far go to prove that the Northern Star is upholding its reputation, which was at first thought to be artificial and only so much boasting to keep up its price. My own experience goes to prove that it is a most prodigious cropper, also a disease resister, for whereas several other varieties were blackened upwards of a month ago, the "Northern Star" remained green until they died off naturally. Last spring I purchased 2lbs of "Northern Star" and received six Potatoes. These were placed in a greenhouse, and when all the eyes had commenced to grow the Potatoes were cut up, each slice having a growth attached, and potted into 3in pots, the number of growths being 55. When they had become established, the greater portion of them threw up other shoots, which I took off and inserted as cuttings, and when planting time came I had 90 plants.

They were planted out during the last week in May, at a distance of 30in from row to row and 18in in the row (which looked far too much space at the time, but which proved far too little). Subsequent treatment lay in earthing up, each one being done individually, by bending down the growths and filling up the middle with fresh soil until they were growing in mounds a foot high, and which caused them to send out innumerable roots from the stems.

By the middle of July they had covered all the space, and you could not see between the rows; and at the end of August some of the growths held upright measured 6ft. They were taken up on Saturday last, October 10, and weighed, there being 303lbs of tubers. The largest root turned the scale at 7lbs, and several roots had 40 to 50 tubers attached. The cuttings produced as heavy a weight as the sets, but not so

many tubers at a root, they not having "run" to the same extent as the original sets. When this variety becomes cheap enough to plant whole sets in the ordinary way the crops produced will be enormous.

Some "Evergoods" that were tried in the same way as the "Northern Star" only averaged 4lbs to each root, grew only 18in high, and never looked happy all the summer under such treatment, although it was similar to that described.—F. K. D., Cheshire.

The Colouring of Apples.

May I ask a few questions? What are the conditions that favour the colouring of fruits, but more particularly Apples? I had, from experience, concluded that sunshine was the greatest factor, especially where the trees are mulched or otherwise fed, and thus have an abundant supply of nutritive material. Sunshine has not the same effect on fruits where the soil is poor, and no feeding is supplied.

Then, again, one has noted the quick changes to a ruddy tone caused by sharp, cold nights, and certainly cold is recognised as one factor that causes the colour-changes, by cultivators in general. But, lastly, What amount of effect has wind and rain? Are their influences (in the case of pot trees at all events) greater than either sun or sharp nights? I ask because lately I was informed by a firm of fruit growers that "they would rather be without the sun than the wind and rain, for the colouring of fruit." Can Mr. Willis bring science to bear on the question? Can "H. D.," or George Abbey, or "W. S.," or any of your many readers, give me (and others) the benefit of their opinions? The matter is one of much interest.—"LAMASOOL."

Hardy Fuchsias.

Referring to your paragraph on page 305, I think that amongst cultivators of hardy Fuchsias there seems to be no general agreement which is the true Riccartoni variety. I have known as many as four names given to the one variety, viz.: globosa, Riccartoni, tomentosa and sanguinea. Mr. Nicholson, I note, says F. Riccartoni is a seedling from F. macrostemma globosa, which is quite sufficient to account for these two names being given to the one plant. Personally, I do not think sanguinea or tomentosa in any way applicable to the variety, and am inclined to think globosa is the correct name. Whether or not I am wrong I cannot say, but I should like someone to give information on the point.

Nowhere have I seen these hardy Fuchsias (globosa especially) luxuriating so much as in Norfolk. Around Cromer, close to the sea, they succeed splendidly. In Lord Battersea's garden at Overstrand, within a stone's throw from the sea, plants 8ft high, and double that width, are to be seen. In a small churchyard close by, too, they are growing and flowering amazingly every year. Of course the hardier and sturdier the plants are grown the better they pass through a severe winter. Much rank manure cannot be good for that purpose, although freedom of growth is necessary to give a profusion of blossom which these hardy varieties are characteristic of.—E. M.

A Hint for Mutual Improvement Societies.

You will see from the leaflet I send that at least one society goes the proper way to business, and besides preparing one to receive a lecture, by giving the briefly outlined frame of the subject, it greatly assists one afterwards in remembering the aspects of the discourse. The Ipswich Gardeners' Society will be favoured by a lecture from Mr. A. Martinelli on the 15th inst., and the following synopsis has been sent out, and is what I think ought to be made a general rule. It is done in a few cases, but not often enough.—Lantern lecture on the 'Evolution of a Flower.' Synopsis:

- I.—Earth's basis a crystalline rock; absence of organic remains. First trace of vegetation. Primary types of land plants,—Lichens; Fungi. "Liverwort"—its fructification, stomata and viviparous buds. Seale and true Mosses.
- II.—OLD RED SANDSTONE. Ferns and Conifers. Silver Tree.
- III.—CARBONIFEROUS. Coal-forming plants; Lepidodendron, Sigillaria, Calamites, &c.
- IV.—OOLITE, roe stone of Dorset. Cycads; Conifers and Ferns. Fossil forest of Cyeads.
- V.—TERTIARY, vegetation tropical. Tree Palms; Custard-apple, Cinnamon; Wellingtonia, &c.
- VI.—RECENT VEGETATION. Equiseta; parts of a flower; pollen, its form; sculpture and germination. Bloom of Meadow Grass. Inflorescence of Yew. Cuckoo-pint. Venus' Fly-trap. Water Crowfoot. Lesser Celandine. Formation of petals. Evolution of carpels and their retrogression to leaves.—F.

Societies.

Royal Horticultural, Drill Hall, October 13th.

A most varied exhibition was brought together on Tuesday last, there being Chrysanthemums, Dahlias, Michaelmas Daisies, Pelargoniums, foliage plants, Orchids, Begonias, and fruit in liberal array. Sixty-four new Fellows were elected. A paper on Raspberry and Strawberry culture by Mr. Hudson, was, owing to the illness of the latter, read by M. Alf. H. Pearson. Only four awards were made in all.

Orchid Committee.

Present: Harry J. Veitch, Esq. (in the chair); with Messrs. James O'Brien, de B. Crawshaw, Walter Cobb, H. M. Pollett, H. Ballantine, Jeremiah Colman, F. Wellesley, Jas. Douglas, N. A. Bilney, G. F. Moore, A. A. McBean, F. W. Ashton, E. Hill, M. Gleeson, W. H. White, W. Boxall, W. H. Young, H. A. Tracy, J. Wilson-Potter, and H. Little.

Orchids filled one side of the hall. Messrs. J. Veitch and Sons, Ltd., had a brilliant display of hybrid Cattleyas, most of them bearing two, three, four, and five flowers. Amongst the best were *Laelio-Cattleyas* x *Nysa*, *L.-C.* x *Wellsiana*, *L.-C.* x *Aphrodite*, *L.-C.* x *Antimachus carnea*, *Cattleya Mantini*, *C.* x *Mrs. J. W. Whitley*, *C.* x *Enid*, and *C. Wendlandiana* together with a fine batch of *C. labiata* (Silver Flora Medal). H. T. Pitt, Esq. (grower, Mr. F. W. Thurgood), Stamford Hill, N., had *Cattleya aurea*, *C.* x *Mrs. J. W. Whitley*, *C.* x *Mrs. Pitt* (a sweet and beautiful flower), *Odontoglossum grande*, *O. crispum*, *Dendrobium Victoria Regina*, and other subjects. (Silver Flora Medal.)

Messrs. Hugh Low and Co., from Bush Hill Park, Enfield, sent well-flowered plants of *O. grande*, *C. Mrs. Pitt*, *C. Gaskelliana alba*, *Dendrobium formosum giganteum*, *Tricopilia nobilis*, *C. Mantini nobilior*, and *Lycaste Skinneri alba*. (Silver Banksian Medal.)

A cultural commendation was awarded to the Right Hon. Lord Rothschild (gardener, Mr. E. Hill), Tring Park, Herts., for *Laelio-Cattleya Nysa superba*. It bore eleven fine flowers on four leads.

Fruit and Vegetable Committee.

Present: Geo. Bunyard, Esq. (in the chair); with Messrs. Jos. Cheal, Henry Esling, W. Bates, S. Mortimer, Alex. Dean, Ed. Beckitt, Horace J. Wright, J. Jaques, G. Reynolds, C. G. A.

Nix, F. Q. Lane, J. Willard, G. Norman, Geo. Wythes, A. H. Pearson, Owen Thomas, Geo. H. Maycock.

Fruiting Apple trees were shown in pots from Wm. Paul and Son, of Waltham Cross. The trees were exemplary models, well furnished with stout young wood, and carrying numbers of fruits. The varieties were Cellini Pippin, Gascoigne's Scarlet Seedling, Blenheim Orange, Allington Pippin, Peasgood's Nonesuch, Lane's Prince Albert, Bismarck, Cox's Pomona, Royal Jubilee, and Emperor Alexander. (Silver-gilt Knightian Medal.)

Lady Tate (gardener, Mr. Wm. Howe), Park Hill, Streatham, made a really fine display of Grapes, fourteen blacks and thirteen whites. The Alicantes were large, well finished, and good; and the Muscat of Alexandrias were very fair. Small plantlets of *Pandanus gracillima* in thumb pots, together with *Smilax* and coloured Vine leaves, were placed in front, and added to the effect. He also showed fruiting plants of *Callicarpa purpurea*, the magenta-purple flowers being in clusters on slender stems at intervals. (Silver-gilt Knightian Medal.)

E. C. Hambro, Esq. (gardener, Mr. Wm. Beale), Hayes Place, Hayes, Kent, staged ten bunches of Black Hamburg Grapes, all from Vines in a cool house, and they were as black as Sloes, even in size, finely shaped, and in all respects excellent in appearance. (Silver Knightian Medal.)

Bottles of Elderberry syrup were shown by Mrs. Sophia Miller, Moylem, Marlow. She had the following note:—"Elderberry syrup may be taken as a liqueur. Two tablespoonfuls added to a tumbler of boiling water make an excellent drink for colds and cold weather."

Messrs. J. Veitch and Sons, Limited, staged a new variety of Apple named "Middle Green," from Frogmore Prolific and Blenheim Orange. It is a beautiful Apple of medium size, smooth and roundish, with clear yellow skin, crimson on the sunny side. The eye is in a small depressed cavity, with a characteristic tiny rise at one side. The characters of the parents seem well blended. The fruits are odorous and attractive in every way, and it is likely to be a first-rate dessert Apple.

Messrs. Dobbie and Co., from Rothesay, sent Dwarf Blood-red Cabbages, neat and solid; also Dobbie's Large Red Shallots (from seeds sown in March, 1900), and others from bulbs planted in February.

Strawberry St. Joseph came from Mr. Harris, The Gardens, Bucklebury Place, and the fruits were well flavoured. Mr. John Gregory, 60, Canterbury Road, Croydon, sent a jar of green Tomato pickle, the receipt for which we hope to print. He had a vote of thanks awarded. A boxful of Gordon Castle Plums (like a Japanese or Kelsey Plum in shape and colour) came from Mr. Chas. Webster, Gordon Castle Gardens, Fochabers, N.B. Strawberry-Raspberries were shown from Mrs. Gleadow, Ladbrooke Grove, W.



Winter-garden at Moulton Paddocks, Newmarket. (See page 346).

Liebertson & Co.



Richardson & Co.

Winter Garden in the Public Park, Wolverhampton. (See page 346.)

Floral Committee.

Present: Wm. Marshall, Esq. (in the chair); with Messrs. H. B. May, Chas. T. Druery, Geo. Nicholson, R. Dean, James Walker, Amos Perry, John Gunn, J. F. McLeod, Wm. Howe, G. Reuthe, John Jennings, Chas. Dixon, J. A. Nix, Chas. Jefferies, C. J. Salter, Wm. Cuthbertson, Chas. E. Pearson, R. C. Notcutt, Chas. E. Shea, W. P. Thomson, E. H. Jenkins, Chas. Blick, Ed. Mawley, and Geo. Paul.

Mr. John Russell, Richmond, opened the autumn season by a wonderful exhibit of *Aucuba vera*, the plants a foot high, covered with clusters of scarlet berries. From Mr. Amos Perry, Winchmore Hill, came an interesting exhibit of *Polygonum molle*, *Aster versicolor*, also two fine forms of *Aster Amellus*. That labelled No. 1 is certainly in advance of many named varieties. Begonias were well displayed by Mr. A. L. Gwillim, Cambria Nursery, New Eltham, Kent, the exhibit being chiefly formed of singles arranged in colours. They undoubtedly bore evidence of good culture and a fine strain. Messrs. J. Jefferies and Son, Cirencester, contributed four boxes of Roses, exhibited in first-rate style for the present month. The best were John Ruskin, Mrs. Sharman Crawford, Louis Van Houtte, Mrs. J. Laing, Madame Hoste, Comte Raimbaud, Ellen Drew, and Ulrich Brunner. (Silver-gilt Banksian Medal.)

Messrs. Jas. Veitch and Sons, Ltd., Chelsea, made a large display of Begonias of the winter-blooming type. The varieties were *Agatha Compacta*, a delightful dwarf blooming pink; *Ideala*, a bright rosy red with much larger flowers; *Agatha*, pink; and Mrs. Heal, crimson, the most attractive of all. The same firm also displayed a small group of *Dædalacanthus parvus*, a dwarf plant with violet flowers, together with a collection of Zonal Pelargoniums, the best varieties being *Snowdrop*, *Florence Miskin*, *Conan Doyle*, *Lord Curzon*, *Dryden*, and *Mary Seaton*. (Silver-gilt Flora Medal.)

From Messrs. J. Peed and Son, West Norwood, there also came a nice exhibit of winter-flowering Begonias, which were represented by well flowered plants of Turnford Hall and Mrs. Leopold de Rothschild, while boxes of *Streptocarpus* hybrids and a good strain of Gloxinias completed a nice display. Mr. G. Reuthe, Keston, Kent, made a small exhibit of *Asters*, *Nerines*, *Crocus speciosus*, and plants of *Shortia galacifolia*.

Mr. E. C. Lawson, 32, Ashley Road, Hornsey Rise, exhibited a new tree tie, the invention of Mr. Edwin Beckett, which is simplicity itself, consisting of strong brown webbing with a buckle, which is easily adjusted.

A glorious exhibit of *Dracæna Victoria* was staged by Messrs. W. Bull and Sons, King's Road, Chelsea. These were all specimens, excellently coloured, and with every leaf perfect. (Cultural Commendation.)

Messrs. J. Cheal and Sons, Crawley, still maintained the popularity of that autumn flower the Dahlia. They were chiefly singles, although there were two boxes of pompons richly

coloured. The most conspicuous singles were *The Bride*, *Lord Rosebery*, *Amos Perry*, *W. C. Harvey*, *Duke of York*, *Meta*, *Princess of Wales*, *Hilda*, and *Beauty's Eye*. (Silver Flora Medal.) Messrs. Hobbies, Ltd., Dereham, made a nice display of Cactus Dahlias (Silver Banksian Medal), and Messrs. T. S. Ware, Ltd., Feltham, exhibited grand decorative exhibit of Dahlias. The mounds consisted of excellent varieties arranged with autumnal foliage. A few of the best were Mrs. Winstanley, Zephyr, J. H. Jackson, F. A. Wellesley, Galliard, C. G. Stredwick, H. J. Jones, and Alpha. (Silver-gilt Banksian Medal.) Mr. H. B. May had *Bouvardias* and Ferns.

Messrs. Ambrose and Sons, Cheshunt, contributed a miscellaneous display consisting of Begonias *Gloire de Lorraine*, and Turnford Hall, good pots of *Lily of the Valley*, *Liliums* in variety, *Azalea mollis*, and *Spiræa japonica*; also an exhibit of the new *Grape Melton Constable*, with a few Apples and Roses. (Bronze Flora Medal.)

Mr. M. E. Mills, gardener to F. Lloyd, Esq., Coombe House, Croydon, staged a group of Begonias of the *Gloire de Lorraine* type, the pink form staged being a reversion from *Caledonia* to the hybrid form.

Messrs. G. Bunyard and Co., Ltd., Maidstone, had a large display of hardy autumn flowers comprised chiefly of *Asters*, in which were noted *A. horizontalis*, *A. Shorti*, *A. Amellus*, *Framfieldi*, *A. A. Onward*, *A. cordifolius* Photograph, and *A. rubra*.

Messrs. W. Cutbush and Son, Highgate, made perhaps the most artistic display in the hall, composed as it was of perennial *Asters* in variety, arranged in large groups on the ground floor, which displayed most effectively the varieties staged. A few of the most prominent were *A. cordifolius elegans*, *A. Delight*, *A. King Edward VII.*, *Triumph*, *Osprey*, *Duchess of Albany*, and Mrs. Raynor. (Silver Banksian Medal.)

CHRYSANTHEMUMS.

Chrysanthemums formed a prominent feature of the meeting. Mr. E. Potten, Camden Nursery, Cranbrook, made a nice display of cut varieties, the chief being *Harvest Home*, *White Quintus*, *O. J. Quintus*, *Mons. E. P. Van Geert*, *La Pactole*, *Nellie Brown*, *Goacher's Crimson*, and *Roi des Blanches*.

There were two really good groups of plants exhibited. The first to be noted were from Messrs. Jas. Veitch and Sons, Ltd., Chelsea, who put up a large collection, which ought to have had a larger space allotted it. The plants were well grown, and the flowers excellent, a few of the most attractive being *Britannia*, *Miss Cicely*, *Louise*, *Calvat's '99*, *Henry Perkins*, *Miss R. Hunt*, *Miss Elsie Fulton*, and *Miss Olive Miller*. The flowers were of exhibition quality.

Messrs. J. Peed and Son, Norwood, made a pretty group of Japanese varieties, the best being *Miss Cicely*, *Lily Mountford*, *Ernest Bettisworth*, *Mrs. T. W. Pockett*, *Marquise V. Venosta*, and *Baden Powell*. (Silver Flora Medal.)

From Messrs. W. Wells and Co., Ltd., Earlswood, Surrey, came

a nice display of early-flowering varieties, with a few specimen blooms of the Japanese. The best early varieties were "Cactus," La Pactole, Reggie, Carrie, Rosie (a grand buff), Polly, and groups of promising single seedlings. In the large flowered section, Merstham Yellow was the most prominent. (Bronze Banksian Medal).

Mr. W. J. Godfrey, Exmouth, Devon, made a good exhibit of Chrysanthemums in a cut state. The most noteworthy decorative varieties were Decorator (a promising bronze), Pink Beauty, Safeguard, Harry Gover, Mons. Mestivier, and La Pactole. (Bronze Banksian Medal).

Certificates and Awards of Merit.

Apple, Middle Green (J. Veitch and Sons, Ltd.).—A medium sized, yellow-skinned, odorous dessert Apple, from Frogmore Prolific and Blenheim Orange. A.M.

Lælio-Cattleya Norba superba (J. Veitch and Sons, Ltd.).—Parentage: C. Mossiæ and L. xanthina. The sepals and petals are a pale bronzy-tea colour, very sweet and pretty. The lip is fluted, opening in front, and is delicately coloured light mauve-purple, the throat being yolk-of-egg hue. A.M.

Melon, Barnes' Fiscal Problem (Mr. W. Barnes).—A large-sized, creamy coloured, netted Melon, with deep red flesh. Excepting for the name, we are full of praise for it. A.M. From A. T. Walter, Esq., Bear Wood.

Nephrolepis Mayi (H. B. May, Edmonton).—The pinnae or leaflets are tortuous, and inclined to become crested. Large plants will doubtless be handsome, but in a young state the fronds are stiff and held erect. F.C.C.

Cardiff Gardeners'.

The first meeting of the session took place at the Grand Hotel, on Tuesday, October 6, when J. Lynn Thomas, Esq., C.B., F.R.C.S., J.P., presided over a very large attendance. Mr. John Basham, F.R.H.S., delivered a lecture, entitled "Notes on Hardy Fruits, especially Apples and Pears."

After addressing the audience at some considerable length on the history of the Apple, pointing out districts that centuries ago were conspicuous for their beautiful and fruitful orchards; but during the time of the Civil Wars great damage was done to them. Unfortunately since then no one seemed to have replenished these orchard plots. Mr. Basham did not hesitate in saying that better Apples had been grown in the Valley of Glamorgan than in any other part of the world; yet, he said, people do not plant, owing chiefly to the insecure holdings of tenancy.

Twenty excellent dishes of very fine Apples and Pears were staged by the lecturer, which illustrated the fact that they were not only larger, but better in flavour, than is generally the case with imported ones. After such a lengthy lecture, full of interesting and historical details, Mr. Basham was accorded the best thanks of the meeting, and was also unanimously awarded a First Class Certificate for the collection of fruit. Mr. F. G. Treseder was also awarded a First Class Certificate for a new type of Dahlia, viz., a Cactus pompon "Mary." A unanimous vote of thanks was accorded the president.—J. JULIAN.

Scottish Horticultural.

The October meeting of this association was held in Dowell's Rooms on the evening of Tuesday last. Mr. Moir, gardener, Rosehaugh, Inverness-shire, read a paper on "Pear Trees on Walls," a paper full of sound practical commonsense instructions as to his growth of Pears on the cordon system, which he believed to be the best for general purposes. He recommended Pears on the Quince stock. With such cordons he gets quickly a crop of fruit, and soon covers his walls. It matters little whether they are oblique or perpendicular; but for walls of 12ft or less he preferred them oblique. The soil he recommended is old turf, with a little bonemeal, keeping the roots from going down to the subsoil. He strongly recommended thinning of both blossom and fruit, protecting from frost, syringing with some insecticide, such as quassia extract, and root-pruning after fruit is gathered. The paper was of a most interesting description, and was appreciatively listened to. In after discussion Mr. Grieve, Mr. Johnstone, and Mr. Mackenzie took part. A very warm vote of thanks was awarded to Mr. Moir.

Mr. Moir, in illustration of his paper, exhibited a large and very excellent display of fruit—Apples, Pears, Apricots, and Peaches—which showed evidence of very high culture, and quite astonished the members present. For size and colour these could not be readily surpassed in any climate or in any season. There were in all sixty varieties, some of the chief of which were Pears: Beurré Spring, Emile d'Heyst, Marie Benoist, Pitmaston Duchess (from pots and wall), Fertility, Easter Beurré, Beurré Baltet père, and Uvedale's St. Germain. Apples: Worcester Pearmain (extra good), Peasgood's Nonesuch, Allington Pippin, Newton Wonder, Manx Codlin, New Hawthornden, Ribston Pippin, &c.; also Diamond Peach, and Moorpark, Gros Peach, and Breda Apricots. A special silver medal and cultural certificate was awarded Mr. Moir for the collection. Messrs. James Grieve and Sons exhibited a plant of Marie Massé Chrysanthemum, showing a beautiful pure white sport, which at the

meeting was named White Duchess. This was much admired and awarded a first class certificate. Mr. Brown, gardener, Silverknowe, Edinburgh, exhibited an interesting collection of leading varieties of early Chrysanthemums. Mr. Johnstone, Hay Lodge, sent a stem of *Pleroma* (*Tibouchina*) *sarmentosa*. Mr. Todd, Shandwick Place, exhibited a very handsome bowl of *Harpelium* Miss Mellish arranged most artistically in a large sized "Floral Aid" stand. The president was awarded a vote of thanks at the close of the meeting.

Beckenham Horticultural.

The first lecture of the session ("Spraying Fruit Trees and Packing Apples as Practised in Canada") was delivered by Cecil H. Hooper a day or two ago. The lecturer said that spraying is much more practised in Canada and the United States than in England, one reason being that insect pests appear to be more destructive there than here, owing to the very large breadths of fruit trees. He mentioned one owner who had 1,600 acres of Apple orchards, trees being planted at 30ft to 40ft apart, and spraying can be done most economically by using horse labour. The lecturer had with him a collection of photographs illustrating the various stages when flower buds, &c., should be sprayed. Several recipes were given (with cost) to bring about the destruction of biting and sucking insects. Mr. Webster, Kelsey Park, placed on the table ripe fruit and foliage of *Monstera deliciosa*, which attracted attention. At the close, hearty votes of thanks were awarded to both lecturer and chairman.—T. C.

Trenching and its Advantages.

This was the title of a paper read before the members of the Reading and District Gardeners' Mutual Improvement Association on the 28th ult. by Mr. W. Turnham, The Gardens, Culham Court, Henley-on-Thames. The subject was treated in a most practical manner under the following headings:—Inversion of soil; Tentative deepening or mixing, and the usual way of keeping the top spit in its natural manner on the top and breaking up the subsoil. Special attention was directed to the fact that trenching was one of the most important operations within the whole range of horticulture, and that the very germ and substance of good trenching was to add to the bulk of the cultivated earth, and improve its quality by converting a certain amount of hard subsoil into porous surface soil. Needless to say, that with such a subject a lively and interesting discussion followed, in which Messrs. Powell, Neve, Townsend, Hinton, Cox, Tunbridge, Bright, Martin, Wilson, Judd, Exler, Herridge, Dore, and Foster took part. The Society's certificate was awarded to Mr. E. S. Pigg, Ropley Lodge Gardens, Alresford, Hants, for a group of splendidly-grown plants of *Primula obconica rosea*. The individual flowers were very fine, and of a deep rose colour. Mr. J. L. Nash, of Bulmershe Court Gardens, staged a dish of splendid Tomatoes, Best of All, and Mr. Durrant, The Gardens, "Preston," vases of Dahlias and Chrysanthemums.

Weather Notes.

Great Rains and High Winds.

Enormous destruction has again been caused by wind and rain throughout the entire kingdom within the past week. Rivers are all in spate; low-lying regions are flooded; corn crops that were cut and stacked have in places been swept away; and as the Scottish weather notes show, much of the harvest in North Britain is still uncut. Within a few days the year 1903 will show the highest rainfall since the Meteorological Office was established in 1866. The highest fall experienced since that year was in 1879, when in London it registered 31.99.

Notes from Newton Mearns, near Glasgow.

Summer has entirely gone, that is to say, the season we call summer. We have had no summer this year, and here autumn is on us all at once. We scarcely can think that it is only three months back when we had the longest day. However, in spite of it all, the country is looking fine at present. The flowers are now gone, and if it were not for a good bloom of a Rose here and there, we may say that winter is here. The frost of two weeks ago blackened everything, and again on Saturday last, 6deg were registered, putting an end to those flowers fortunate enough to stand the spell of frost preceding. Rain has fallen intermittently since the month came in, and it is pitiful to see such a large amount of grain standing out in it all. In some places cutting has not been completed. I fear that unless good weather sets in at once, there is little hope of saving what grain is out. To-day (Monday, October 12) it is simply pouring, not to speak of yesterday; and after Friday and Saturday's good weather it was expected that the harvest would be continued in fair conditions, but, alas! we perhaps should say, "Old times are changed, old manners gone."—N. R.



Hardy Fruit Garden.

CHECKING THE WINTER MOTH.—From the present time until the end of the year the winter moth is on the wing, but it is only the male moths which fly, the females being only furnished with rudimentary wings, consequently they have to crawl up the stems or trunks, of Apple trees chiefly, for the purpose of depositing their eggs. It is while in the act of ascending the stems that means should be taken to trap the female moths. This is best done by tying grease-proof paper round the trunks a few feet from the ground in the case of standard trees, but necessarily lower with bush trees, and smearing this well over with ordinary cart grease, or Horne's fruit tree dressing. In attempting to cross the band of grease the moths are trapped, also should they pass underneath the paper, their progress is stayed by the tie which bars the way. Although the moths are not general until November, it is desirable to place the bands early so as to catch the first on the move. The grease will dry up in time, but before this happens smear the bands with a fresh supply; in fact, keep the surface of the paper in a sticky condition. A flat knife may be used to lay on the grease, which should be in a condition that it does not run.

PREPARATIONS FOR PLANTING FRUIT TREES.—The most important matter requiring attention prior to planting any kind of fruit tree or bush is the due preparation of the soil. Where any large plot of ground is to be devoted exclusively to fruit, the best method of preparation is to trench the ground, not doing so and bringing up inert material to the surface, but deepening the whole bulk two spits deep by the process known as bastard trenching. Briefly described, this is a method of trenching whereby two spits of soil are moved, but still holding the same relative position. Only in very poor material should manure be applied, and then only liberally for small bush fruits and Strawberries. Rich soil in the case of Apples, Pears, and stone fruits, producing over-luxuriant growth. Where a tree here and there is only required to be planted stations of sufficient size may be prepared. These will suffice if 6ft or 8ft in diameter. Break up to a good depth, and place in drainage, if the ground is waterlogged, or raise the soil above the natural level. For planting trees against walls a width of border should be prepared of 3ft to 6ft. The former will do for cordons, the latter for fan-shaped and horizontally trained specimens. All details as regards the soil having been settled, there still remain several minor points to be seen to. Tall trees or standards will require stakes, and these should be provided in readiness, together with ties and straw or strips of canvas to prevent abrasion of the bark. Some flaky manure to spread over the roots as a mulching is necessary also.

THE TREES ON ARRIVAL FROM THE NURSERY must be carefully unpacked, the roots pruned, and spread out carefully in a trench of moist soil to recover somewhat before the final planting, which, of course, may be delayed by the weather. Under this treatment the trees will not suffer, but may be forming young fibrous roots.

THINNING ORCHARD TREES.—Trees standing too thickly upon the ground in orchards are not, and cannot be, productive. They are simply spoiling each other by the wholesale exclusion of light and air. In such cases drastic measures are necessary. First of all the trees themselves should be thinned so as to leave space all round each. Then will follow the thinning out of branches; but too much ought not to be effected at once. A little readjustment may be made, and dead or very weakly wood removed. This will suffice for one season. A more general thinning and regulation may be effected where no previous thinning of trees has been necessary.

WALL TREES.—Branch thinning and spur thinning may well be carried out this month. The branches of horizontally trained trees are frequently too closely together, and this is most apparent when the spurs are elongated, so that those proceeding from one branch compete with those from others. Branches, however, should not be too thickly placed if not nearer each other than a foot. Crowding most likely is then caused by the nearness together of clusters of spurs. Take the opportunity to first thin these out, and then to shorten the most prominent and the least fruitful parts. By carrying this out for a few years a gradual improvement will be effected.

FAN TRAINED WALL TREES must also be examined, removing crowded branches and shoots, weakly and useless spray, exhausted and debilitated growths. If spur growths are present as they may be on trees not wholly confined to being furnished with young shoots, as Peaches and Nectarines usually are, they

should be gradually reduced in length so as to keep the spurs close to the wall. The trimming and pruning effected will necessitate the re-arranging of the trees on the wall or fence. This will permit of giving full effect to the principle of allowing ample space for all the main bearing parts, and ensuring good crops.—EAST KENT.

Fruit Forcing.

VINES FOR STARTING IN DECEMBER.—Pruning, if not already done, must not be further delayed, as early and complete rest for a few weeks contributes to an even break. Pruning to two buds is usually followed by a good show of useful bunches, but if such has not been so in previous years, or larger bunches are desired, the shoots may be left a little longer, or pruned to the most promising bud near to the base. What, however, is gained in size of bunch is usually lost in compactness thereof, unevenness of berries, and bad finish. Besides, bunches of 1lb to 2lb weight are quite large enough for early Grapes.

Remove any loose bark, but avoid the close peeling and scraping that injures the rods, and wash them with tepid soapy water, 4oz paraffin softsoap to a gallon of water, or where there has been red spider, 1oz caustic soda and 1oz pearlash to a gallon of water, or where there has been fungi trouble use a solution of sulphate of copper, 1oz to 1½ gallon of water, apply carefully, but just wetting every part with a brush moistened in the solution. Thoroughly cleanse the woodwork of the house and limewash the walls. Remove the surface soil down to the roots, if not to the whole extent of the border, for a distance of 3ft or 4ft from the stem, and supply fresh loam so as to encourage new fibres, and an extension of fresh roots from the collar, adding about a quart of steamed bonemeal and a gallon of wood ashes to each three bushels of loam, or supply some approved fertiliser, according to the instructions. Keep the house cool, dry, and airy until the time arrives for starting.

HOUSES OF RIPE GRAPES.—Thin-skinned Grapes are more susceptible to cold and damp than are the thick-skinned Grapes. This applies equally to Black Hamburg and similar kinds, as to Muscat of Alexandria and Madresfield Court; but Hamburgs do not require a temperature of over 45deg for good keeping, and there must not be any deficiency of moisture at the roots, otherwise the Grapes will shrivel. Lose no opportunity of giving air when the days are fine, turning on the heat so as to cause a gentle warmth in the hot-water pipes.

LATE GRAPES.—Thick-skinned Grapes require time to mature after they are ripe. Alicante, however, improves nothing whatever in keeping, and is at its best as soon as well ripened, and the same may be said of Gros Maroc.—ST. ALBANS.

Young Gardeners' Domain.

The Winter Season.

This is the season of long nights and shortened days; and during these evenings of lengthened leisure and freedom from work in the garden, the Editor would again extend the usual invitation to the men of the bothy, to send short notes on the subjects with which they are chiefly engaged. We have had a letter on the bothy question during the past week; but that matter, we think, was sufficiently debated in these pages last spring, and for the nonce, may be left at rest. Would writers please confine their efforts to from 300 to 500 words, writing clearly, and only on one side of the paper? Horticulture is wide, and its phases are numerous; the choice of a subject cannot be difficult.

OLD ENGLISH GARDEN BOOKS AND GARDENING TO THE END OF THE 17TH CENTURY.—The first monthly meeting of the present session of the Isle of Wight Horticultural Association was held at Warburton's Hotel, Newport, under the presidency of Dr. Groves, J.P. After the reading of the minutes of the last meeting, and reports of the Association Excursion to Ryde, and of the recent Sweet Pea Show having been approved and confirmed, the Chairman, in the course of a stirring address, congratulated the Association on the progress made. Subsequently he read a most interesting and instructive paper, entitled "Old English Garden Books and Gardening to the End of the 17th Century." The doctor prefaced his paper by remarking that to fully comprehend things of the present we must be well conversant with the past history of the subject dealt with, so that the standard of to-day might be judged by the standard of time. In concluding his review of Old English garden literature and his delightful excursions into Old English gardens, Dr. Groves remarked that when we read old gardening books we are inclined to say, "There is nothing new under the sun." The certificates at the Sweet Pea Show were distributed to the successful exhibitors. Two new members were elected. The next meeting will be at Warburton's Hotel, when Mr. J. H. Silsbury, of Shanklin, will deal with "Chrysanthemum Culture."

THE BEE-KEEPER.

Feeding.

The honey flow of 1903 has practically ceased, and many imagine that feeding with syrup must of necessity follow. This is a mistaken notion arising from ignorance of the causes of feeding, which are, 1, early in season to stimulate brood rearing, and 2, in the autumn for the same reason, and because the hives have an insufficiency of stores. Do it as you will it is a very sticky task, expensive, and often causes robbing. There is nothing to beat a good supply of sealed honey in the brood chamber, and if this course can be adopted loss of bees by dwindling or starvation is almost an unknown thing.

There ought not to be less than 20lb. of sealed stores in the hives, but 25lb. would be safer. Remember, the stronger the colony the better it will winter, and the less stores will be consumed. Having settled the question of whether to feed or not to feed, if the latter be necessary, make good syrup made from the best granulated sugar, giving a wide berth to treacle and poor cheap sugar. Take 10lb of the best granulated sugar, add 5 to 7 pints of water, and place on a slow fire, and heat to 170deg to 180deg, and stir all the time. Some people boil it, but burnt syrup will bring death in its train to any colony consuming it. Do not make the syrup too thick, *i.e.*, more than half and half during September, but if feeding be absolutely necessary, and this is only through sheer neglect, in October, then make it in the proportion of 8 to 6. The reason why thick syrup feeding is not advisable is being thick it will granulate, and in this form is no use to the bees, for they will only carry it out when the opportunity arises. Avoid the addition of chemicals which are advertised to prevent and cure foul brood.

THE FEEDER.—No expensive feeder is needful, take a 3lb jam bottle, fill it up to the brim, and stretch over tightly, tying firmly with string, some cheesecloth or muslin. Place the inverted bottle over the frames, taking great care to spill none, and close the entrances so that one bee only can pass at a time. It is well not to put on cold syrup, as this reduces the temperature of the brood chamber, and will not be taken down so rapidly as lukewarm syrup. Wrap up the whole snugly, and fill every bottle up to the brim; if not, then the syrup will run out, for it will be forced down by the air above. One warning more and I have finished: feed at night, and this will assist to prevent robbing.—HYBLA.

Robbing.

When the honey flow begins to fall off, then look out for robbing. If it can be checked in its early stages, then it may soon be cured.

CAUSES.—It is seldom that bees resort to robbery during the time that there is plenty of work for them in the fields. Like man, they get into mischief during the time of idleness and leisure. Strong colonies are never robbed, and but only the weak and queenless hives. So a strong colony pays in two ways, first there is more surplus, and second there is less worry and care needed at the close of the honey harvest. One of the chief causes is leaving pieces of comb containing honey about the hives.

HOW TO DETECT IT.—There is generally a great deal of agitation on the alighting board, and bees may be seen struggling with each other, and rolling off, holding one another tightly the while.

HOW TO CHECK IT.—It is usually best to close the entrances so that one bee only can pass at a time. Very seldom is it that this fails, unless the stock be queenless, and then they seem to lack the energy necessary to protect their stores. In this case the remedy is clear, either unite them to a strong or even a weak stock, and thus help the weak to become powerful against a similar attack. A "V" shaped entrance will sometimes be very



"V"-shaped hive entrance.

helpful, and this must only be wide enough to allow one bee to pass at a time.—HYBLA.

Modern Bee-keeping.

At a meeting of the Society of Arts held in London some time ago, Mr. Walter F. Reid, expert of the British Bee-keepers' Association, read a paper on Modern Bee-keeping. Mr. Reid traced the industry of bee-keeping from the earliest times. Bee-keeping, he said, was one of the oldest, if not the oldest, of all the industries connected with agriculture. He described the progress in the construction of the hive and the different hives in common use. There could be no doubt that bee-keeping in most rural districts was remunerative. An apiary was started in 1894 by two factory workmen, who bought a "skep" of bees on joint account. They had now twenty-four

stocks, which yielded on an average 56lb of honey per hive. But, said the lecturer, there was a larger and more important question connected with bee-keeping, namely, the fertilisation of blossoms and the production of fruit and seed.

A large grower of bush fruit in Hertfordshire established an apiary in his grounds, and at once found that his produce increased more than fourfold. As he now sent off six to ten tons of Gooseberries per week during the season, the money value of his bees was not to be estimated by the yield of honey alone, although this was also considerable. It had been found that some of our most highly cultivated fruits were not self-fertile; that was, the blossoms on a tree would not fertilise each other, but must receive pollen from another tree before they could bear fruit. This was the cause of the absence of fruit in many trees that blossomed luxuriantly, especially when planted singly in small gardens. What agent more suitable than a bee could be found to bring the golden dust upon which the future crop depended?

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
October.										
Sunday ... 4	S.W.	deg. 59.7	deg. 57.0	deg. 64.4	deg. 52.5	Ins. 0.43	deg. 59.0	deg. 59.0	deg. 57.7	deg. 42.0
Monday ... 5	S.W.	60.5	59.0	61.9	54.2	0.15	58.8	58.8	57.7	48.1
Tuesday... 6	S.W.	55.1	53.7	63.2	53.0	0.16	57.5	58.5	57.7	44.2
Wed'sday 7	W.S.W.	56.7	54.8	62.9	53.2	0.04	57.4	58.2	57.7	48.1
Thursday 8	S.S.W.	60.6	59.7	63.6	53.2	0.15	58.2	58.2	57.7	45.2
Friday ... 9	W.S.W.	53.6	50.2	57.7	49.5	0.07	58.2	58.2	57.6	44.5
Saturday 10	W.N.W.	47.6	44.7	57.5	38.0	0.20	55.2	57.9	57.5	30.0
MEANS ...		56.3	54.2	61.6	50.5	Total. 1.20	57.8	58.4	57.7	43.2

Dull, mild weather, and rain every day.

Trade Catalogues Received.

- H. Cannell and Sons, Swanley, Kent.—*Autumn Catalogue.*
 Frank Cant and Co., Braiswick Rose Gardens, Colchester.—*Roses.*
 E. P. Dixon and Sons, Hull.—*Fruit Trees, Roses, Shrubs, &c.*
 F. C. Heinemann, Erfurt, Germany.—*Novelties and Specialities, 1904.*
 H. P. Kelsey, Beacon Buildings, Boston, Mass., U.S.A.—*Rhododendrons, Azaleas, Kalmias, &c.*
 Wm. Paul and Son, Waltham Cross, Herts.—*Roses.*
 A. W. P. Pike, Llanishen, Cardiff.—*Carnations and Picotees.*
 Thomas Rivers and Son, Sawbridgeworth, Herts.—*Fruit Trees, Roses, Shrubs.*
 Frederick Roemer, Quedlinburg, Germany.—*Novelties in Flower Seeds for 1904.*

COMMUNICATIONS RECEIVED.—Rev. C. H. B., Rev. P. R., H. M., J. Kennell, O. T., E. Molyneux, J. S., R. P., J. T., H. B., J. Pegler, D. I., J. W., R. P. B., M. T., E. Mawley, R. and Co., H. S., with thanks, will use them; J. A. S., R. D., H. D., J. J. W., G. E. S., C. H. B., J. McL., G. R., K., Dublin; T. A. W., W. B. B., Rev. J. H. P., W. T., J. R. S. C., T. and Sons, C. W. M., Newcastle; W. S., M. and M., R. J. and Sons, Ltd., W. C.

THE REPRODUCTIVE POWER OF TURNIP SEED.—Writing to the "Gardener's Chronicle," Mr. Wm. Cuthbertson says: When harvesting Dobbie's Golden Ball Turnip seed this summer at Orpington, I was struck with the appearance of a remarkably fine plant. I had it saved by itself and threshed out. The weight of seed was 8½oz. I counted the seeds in 1-16th of an ounce, and found they numbered 1,120, which works out at 147,840 for the 8½oz. Thus a single seed sown in July, 1902, has reproduced itself 147,840 times in twelve months."

GREAT LONDON SUCCESSES.—We have received the following note: "In the large open competition of the British Dairy Farmers' Association, held in the Agricultural Hall, London, last week, some of the most important prizes for roots were won by the produce of Webbs' seeds, viz.: First, second, and third prizes, Webbs' Mammoth Long Red Mangold; first prize, Webbs' Smithfield Yellow Globe Mangold; first prize, Webbs' Imperial Swede; and second prize, Collection of Webbs' roots. There were 143 entries for these prizes, and considering the strength of the classes, the remarkable success of Messrs. Webbs' seeds must be very gratifying to this firm."



TO CORRESPONDENTS

* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.

STORING GERANIUM ROOTS (C. A. S.).—The plan adopted by gardeners is to lift the plants at this time of year; trim off some of the sappy growths, and a few of the roots; "box" them off; that is, plant them in wooden boxes of 4 in to 5 in depth, and well drained, boards being nailed transversely across the bottom of the boxes to keep them above the ground. The soil used is of a light, fibrous character, having 50 per cent. of sand and leaf mould, the rest any light soil mixed with some turfy loam. Water the roots when they are set in, but after they show signs of having become established in the boxes keep them almost dry through the winter. They like a light, cool, dry frame or house. We have seen pot plants kept in cupboards without a drop of water for some months, and they break away when repotted in spring, but have not attempted this with freshly-lifted plants. It is remarkable, however, to note the persistence of life in the shrivelled stems of Geraniums that are bunched and hung up to dry.

TREATMENT OF CRIMSON RAMBLER ROSE (T. Q.).—This Rose, like most of the climbing Roses, is best treated on the biennial system, namely, taking young shoots each year from the base of the plant, or that of the forking of the main branches, and when the flowering is over, or not later than the falling of the leaves in autumn, cutting away the flowered branches in favour of the shoots produced during the summer. Thus, the shoots produced one year flower in the following summer, on growths produced from them laterally, other growths to take their places are retained, and the two years old is cut out at the winter pruning, and the young, strong, well-matured growths trained in their place, only the immature points of the shoots being shortened to thoroughly ripened wood. You will, therefore, cut out the branches that have flowered wonderfully during the past summer to long and vigorous growths of the current year, and train them in place of those cut out at about 1 ft distance apart on the wall space, shortening those retained at the limit or a few inches shorter, that is, at the top of the wall. This is simply the procedure adopted with Raspberries, and modified so as to keep the wall or other surface duly furnished with bearing or flowering growths year by year.

CRACKING OF FRUITS OF WALTHAM ABBEY SEEDLING APPLE (A. W. H.).—The specimen is affected by Apple scale (*Fusicladium dendriticum*), the most injurious of fungus parasites attacking the Apple, in many instances ruining half or more of the entire crop, and also injuring the growth of the tree, as it attacks the leaves and shoots as well as the fruit. The fungus, as a rule, first appears on the leaves under the form of small, roundish dark spots, mostly on the upper surface. These spots rapidly increase in size, especially during wet, cold weather, run into each other and form large, irregular-shaped blackish blotches. In some cases the young shoots are affected and more or less injured. The fungus passes from the leaves to the fruit, or both may be affected simultaneously, the dark-coloured mycelium spreading on the leaf or fruit between the cuticle and epidermis, and the cuticle is eventually ruptured, and short branches protrude, each bearing a conidium or spore at its tip. The disease is extended through the season by means of these conidia or spores. The disease is carried over the winter by means of the mycelium present in fallen leaves or fruit, and, according to Goethe, an ascigerous form of fruit is produced on the diseased patches, especially of young wood, which matures in spring. The preventive means are:—Spray with Bordeaux mixture; first, just as the flower-buds begin to open; second, when the petals of the flowers are falling; and third, when the fruit is the size of Peas or slightly larger. If the season be rainy a fourth treatment should be given a fortnight after the third. Bordeaux mixture at ordinary strength, however, is apt to scorch the foliage, especially when young, hence it is advisable to use a dilute mixture, say, 1 oz of copper sulphate and 1 oz. of quick-

lime to each gallon of water. It is excellent practice to spray in late winter or very early spring, before the buds begin to swell, with a simple solution of copper sulphate, 1 oz to 1½ gallon of water, and afterwards follow as before advised with dilute Bordeaux mixture, ascertaining a safe strength before applying generally, so as not to scorch or injure the foliage.

VINES NOT RIPENING THE WOOD (J. T.).—Any that are not yet brown and hard in the wood should have a temperature of 60deg to 65deg by artificial means, with a little air constantly. The heat from sun influence may run up to 85deg or 90deg, only let there be enough air to insure a circulation. The laterals should be reduced by degrees, bringing them down to the pruning buds, and when there is no danger of starting these, the shoots may be shortened to about two leaves above the pruning buds. This will cause the latter to plump, and by keeping the house rather warm by day, with ventilation, and turning off the heat at night, with free ventilation, the Vines will go to rest.

IRIS LEAVES GOING OFF (S. P.).—Yes, the Iris leaves are affected by a black mould closely allied to the fairy ring of Carnations, and often disfigures and destroys the leaves of cultivated Iris, Hemerocallis, &c. The mycelium is localised, but as the diseased spots are often abundant, and also large, attacked leaves soon die. The spots, at first pale, elliptical, brown with a darker margin, eventually become studded with minute olive-brown tufts of conidiophores, bearing the large warted conidia of spores at their tip. This is the fruiting stage of the fungus (*Heterosporium gracile*, and later on minute sclerotia are formed in the dying leaves, the parts having a dark or black mouldy appearance. It is important, therefore, to collect and burn all the diseased leaves, and this being done the disease does not spread and the danger of its occurrence the following season is much diminished. Spraying with ammonical carbonate of copper solution has been found to check the disease, and probably this would be desirable in your case, so as to prevent the germination of any spores or conidia that may be dispersed in removing this affected leaves. Clearing away diseased leaves and burning them is the chief thing to be attended to now. Probably the wet weather has severely weakened the plants and rendered them more susceptible to disease. We have found dusting with newly-slaked lime useful, and this we should do after well trimming the plants from all diseased parts.

SPOTS ON GRAPES (H. J. M.).—The Muscat of Alexandria Grapes are affected by what is known as "spot," and caused by a fungus named *Gloeosporium ampelophagum*, or, according to some, *G. laticolor*. It occurs on the young shoots, leaves, and fruit, but commonly in this country on the fruit, and causes a "spot," not unlike that resulting from scalding or swelling berries, and on the ripening or ripe Grapes a brown discoloration, and the affected berries soon rot. It is probably induced by a close, moist atmosphere, at least it does not occur under freely ventilated atmospheric conditions, and this especially in the case of Muscat of Alexandria is particularly desirable. The prevention of moisture being deposited on the ripening or ripe berries is imperative, a little air being given constantly with a gentle warmth in the hot water pipes, increasing the ventilation early in the morning so as to dissipate the moisture, and allow the Grapes to heat evenly with the atmosphere, and thus preventing the deposition of moisture on the berries the Grapes do not "spot." It has been found of service to dress the Vines when resting with a solution of iron sulphate, 1 lb to a gallon of water. The mealy bug would not affect the Grapes in the matter of spotting, but it should be destroyed, as it spoils the Grapes by its excrementitious matter.

NAMES OF PLANTS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (J. F.).—*Aster linosyris*. (F. L.).—1, *Aster patens*; 2, *A. longifolius*; 3, *A. Novi-Belgi* "Neptune"; 4, *A. diffusus horizontalis*; 5, *A. patulus*; 6, *Saponaria officinalis* fl.-pl.; 7, *A. Amellus*. (N. N.).—1, *Chimonanthus fragrans*; 2, *Salvia virgata*; 3, *Harrison's Musk*; 4, *Mimulus cardinalis*. (F. K., Sunderland).—1, *Physostegia virginiana speciosa*; 2, *Polygonum polystachyum*; 3, *Salvia azurea grandiflora*; 4, *Euphorbia Cyparissias*; 5, *Euphorbia Wulfenii*; 6, *Polygonum multiflorum*. (J. B., Leith).—1, *Mühlenbeckia varians*; 2, *Acer Negundo*. (Journeyman, Monmouth).—1, *Verbena ericoides*; 2, *Verbena venosa*; 3, *Pentstemon perfoliatus*; 4, *Pentstemon campanulatus albus*; 5, *Ipomœa purpurea*. (Norwood).—1, *Statice incana*; 2, *Amobium alatum*. (S. P.).—1, *Acer platanoides Schwedleri*; 2, *A. pictum*; 3, *A. dasycarpum*; 4, we are uncertain of. (S. Jeans).—1, *Aster Novæ-Angliæ pulchellus*; 2, *A. Novi-Belgi* var.; 3, *Helenium autumnale striatum*; 4, *A. commutatus*; 5, *laevis*, Robert Parker; 6, *A. Drummondii*.

NAMES OF FRUITS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (T. A.).—1, Newton Wonder; 2, Gravenstein, this is being sent from America in quantities at the present time; 3, Stirling Castle. (N. F.).—1, Pear Louise Bonne of Jersey; 2, Canon Hall Muscat Grape; 3, Pear, Durondeau; 4, Thompson; 5, Fondante Thirriot. (J. B., Wolverhampton).—1, Golden Noble; 2, Margil.



Manuring Potatoes.

In the year 1900 a very large number of experiments were conducted on Scottish farms, under the auspices of the West of Scotland Agricultural College. The tests covered the fattening of sheep and cattle; the manuring of hay, Turnips, and Potatoes; rotation manuring; and the comparative merits of varieties of Oats. The official report (which we have read with great pleasure and interest) is a most exhaustive one, and well worthy of the attention of all agriculturists. But there are some results of these experiments which are so striking as to justify special mention here. These are connected with the manuring of Potatoes, and are the more remarkable inasmuch as the experiments with manuring Turnips were particularly barren of useful results.

Various manures were tried on two varieties of Potatoes, viz., Maincrop and Up-to-Date. On sixteen different farms, on ten of which Maincrop was grown, and on six Up-to-Date, on each field a piece was left unmanured; another was manured with twenty loads per acre of farmyard manure; another with ten loads farmyard manure, 4 cwt superphosphate, 1 cwt sulphate of ammonia, and $1\frac{1}{2}$ cwt of sulphate of potash; and still another plot with 6 cwts superphosphate, 2 cwts sulphate of ammonia, 1 cwt nitrate of soda, and 2 cwts of sulphate of potash. As the results are taken from the average of ten farms in the case of Maincrop, and six in that of Up-to-Date, they may be accepted as being conclusive, not only with regard to the cropping qualities of the two Potatoes, but as to the effect of manure on the crops generally, and the two Potatoes individually.

On the unmanured plots the average produce of Maincrop was $3\frac{1}{2}$ tons; of Up-to-Date, $4\frac{1}{4}$ tons. Grown with farmyard manure only, Maincrop produced 6 tons 3 cwt, an increase of 2 tons 13 cwt; but Up-to-Date produced 9 tons 6 cwt, an increase of 4 tons 12 cwt, or nearly double that produced by the unmanured plot.

With ten loads manure, and the smaller quantity of artificials, the results as regards Maincrop were practically identical with those from farmyard manure (twenty loads); and the same were obtained again from the large application of artificials only; but Up-to-Date, though responding well to the influence of the artificials, did not quite equal its own results from the twenty loads of muck alone; the returns from the manure and artificials, and from artificials only, being identical, and in each case half a ton below the all-manure application.

In addition to ascertaining the total cropping results, careful note was also taken of the effect of the manures on the quality of the tubers, but only in connection with the Maincrop variety. The results here are decidedly startling, for it has been an axiom amongst old Potato growers that the influence of artificials was against quality, and there has been great prejudice against their use on that account. We imagine that this idea has grown through observation of the effects of nitrogen used alone, and that other well balanced mixtures have shared in the condemnation.

As a general result of these experiments, it is conclusively proved that 20 tons of farmyard manure produce a very small increase over the quantity produced by 10 tons (both without artificials), the money return being 11s. 7d. per ton for the first 10 tons, and only 3s. 3 $\frac{1}{2}$ d. per ton for the second 10 tons! Not only is this the case, but analyses of the samples proves that the tubers produced by the smaller dressing are of firmer texture and higher quality than the others, and it necessarily follows that the quantity of manure which may be applied profitably to the Potato crop is strictly limited, and that it is not much more than 10 tons per acre.

We have ourselves applied twelve loads per acre systematically for a number of years, previous observation having taught that that quantity was the best mean to stick to. We have proved eight loads to be too little, and though we

were never so extravagant as to use twenty loads, we have seen neighbours do so; but the results never convinced us that twelve loads were not enough. Of course, we used artificials as well, and we fancy that eight loads more manure, with the attendant labour, may very economically have 25s. worth of artificial manure substituted for it, and leave a like sum saved to the banking account.

But we have wandered away from the question of quality. The percentages of starch contained by the various samples were as follows:

No manure: starch, 18.24. Twenty tons farmyard manure alone, 17.38.

Ten tons of farmyard manure alone, 17.92. Ten tons yard manure with artificials, 18.36.

Artificial manures, 18.70.

Here is striking evidence that artificials tend to improve the quality, whilst yard muck has an opposite effect. The more muck is used the lower is the quality of the crop. It is remarkable, also, that on the "no manure" plots the quality is not so good as on the artificial manure plots; although it is considerably better than the yard manure pieces.

There is, however, one point to be borne in mind, and that is, that these satisfactory results were produced by a mixture in which the potash took the form of *commercially pure sulphate of potash*. Separate experiments were carried on to compare the effect of the various forms of potash, and when muriate of potash, kainit, and sulphate of potash were used with other artificials, but against each other, it was found that not only did sulphate of potash produce the best quality of Potatoes, but that it was the most effective form of potash to use in conjunction with farmyard manure.

It is evident from a very brief review of the chief points in this report of the West of Scotland Agricultural College that very good and careful work is being carried on by it; and the results of its labours, especially with regard to the experiments on Potatoes, should be most encouraging to Scottish Potato growers; for they conclusively prove that success does not depend upon an inexhaustible supply of farmyard muck, but that valuable crops may be grown without any at all; and that the increase of the Potato acreage is only limited by the arable land available and the supply of necessary labour. The last item is the real difficulty, for Potatoes employ much labour. In most seasons Great Britain can easily provide her own Potato supply; and by the encouragement of this industry our legislators can do more than in any other way to keep the people on the land.

Work on the Home Farm.

We are still going through experiences of storm and flood. Some farmers are trying to thresh, and others to lift Potatoes, with ill success in either case. Many Potato fields are being commenced before the Potatoes are fit, because the Irish hands would wait no longer. It was a case of "start work or we go." It is difficult to ascertain the facts as regards the progress of the disease, but there can be no doubt it is very serious. We can vouch for the fact that in at least two instances the epidemic has made rapid progress in the pie, there having been very little to see of it when the Potatoes were lifted. We are giving ours time in the ground, so that the worst may be past before we touch them. We hear of many waggons of Potatoes coming back by rail to the growers, having been refused by the consignees. Growers must necessarily fight shy of risking immediate delivery, under such circumstances, and we advise all sellers to act very cautiously. The safest plan is to deliver to the buyers' order only at the sellers' station.

We hear Evergoods are good and sound, but Empress Queen is not so hardy as might be. We hope to be able to speak with some authority on the new kinds very shortly.

We are sorry to say that stacks are threshing out in very poor condition, and very few of the new samples are at all satisfactory. The driest Wheat fetches 25s. 6d., and some of the damp rubbish can be bought for 21s. Barley makes from 20s. to 24s., but none of it will make malt unless it is previously dried. We have not yet seen a sample of Wheat dry enough for sowing, and seed time is close at hand.

Bad weather and unfavourable corn markets have combined to cause a decided slump in the sheep market. Needy sellers want money, and the needy buyers are hindered from raising any, and there is a deadlock. Our lambs are doing nicely on Turnips, which are firm and good, but we have seen larger roots and heavier crops. The lambs look full and well and very bright in their skins. They are still eating $\frac{1}{4}$ lb of lamb food per head. It is rather expensive, and we shall gradually reduce it by half and substitute a little Clover in the rack.

PLANTING SEASON



PAULS' ROYAL NURSERIES

WALTHAM CROSS, HERTS.

12 miles from London. South Entrance four minutes' walk from Waltham Cross Station; West Entrance three minutes' walk from Theobald's Grove; both Stations on the Great Eastern Railway.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Gold Medals in 1903 from Royal Horticultural and Royal Botanic Societies.

FRUIT TREES for the Orchard, Garden, and Forcing House. Hogg Memorial Medal, 1901.

HARDY TREES for Streets, Parks, and General Planting. Silver Medal from Royal Agricultural Society of England.

SHRUBS, both Evergreen and Deciduous.

CLIMBING PLANTS, Hardy and Greenhouse.

RHODODENDRONS, CAMELLIAS, & AZALEAS.

HERBACEOUS PLANTS in great variety.

BULBS and SEEDS, and all Garden Sundries.

PRICE LISTS ON APPLICATION. INSPECTION INVITED. Upwards of 1000 Medals, Prizes, and other Awards at leading Exhibitions during the past 42 years.

SOLE POSTAL ADDRESS—

WM. PAUL & SON,

WALTHAM CROSS, HERTS.

Rose Growers by Appointment to His Majesty the King.

GRAPE VINES in POTS

Extra Strong Fruiting and Planting Canes in all Leading Varieties.

FIGS IN POTS

All Leading Sorts.

Bushes and Fan-trained for Walls.

DICKSONS Nurseries CHESTER

WILLIAM BARRON & SON

Landscape Gardeners and Nurserymen,

ELVASTON NURSERIES, BORROWASH, DERBY.

Invite intending planters to inspect their unrivalled

STOCK of ORNAMENTAL & FOREST TREES, RHODODENDRONS, ROSES, & FRUIT TREES.

Send for Catalogues and List of Public and Private Works carried out by them.

1500,000 BULBS.

Spanish Iris, Yellow, White, and Blue	7/6 per 1000.
Crocus, all colors	5/6 per 1000.
Sir Watkin Narcissus	5/6 per 100.
Horsefieldii	5/6 per 100.
Trumpet Narcissus	7/6 per 1000.
Glory of Leiden Narcissus	6d. each.
Madam de Graaff	3/6 each.
Sweet Scented Pheasant Eye	
Narcissus	5/6 & 7/6 per 1000.
Mixed Narcissus	5/6 per 1000.
Double Daffodils	5/6 & 10/6 per 1000.
Tulips, Mixed (choice)	2/6 per 100.
Single Lent Lilies	3/6 per 1000.
Snowdrops	5/6 & 7/6 per 1000.
Strawberry Plants	1/6 per 100.

SEND FOR LISTS BEFORE ORDERING ELSEWHERE.

Cross & Son, Daffodil Nurseries, Wisbech.

LOVELY TREES

CHARMING EFFECTS can be produced by planting the choicer and better varieties of

Ornamental Flowering Trees,
Ornamental Foliage Trees,
Ornamental Fruiting Trees.

See our Special Offer of above in last week's issue of the *Journal of Horticulture*, page 345.

Complete Descriptive Catalogue of all

THE BEST TREES & SHRUBS

and GENERAL NURSERY STOCK for present planting, Now Ready,
GRATIS AND POST FREE.

CLIBRANS, ALTRINCHAM AND MANCHESTER.



For Market and Private Growers,

Ornamental Trees, Shrubs, &c.

Descriptive Catalogues Post Free.

J. CHEAL & SONS
Crawley, Sussex.

LONDON FERN NURSERIES,

LOUGHBORO' JUNCTION, LONDON, S.W.—Stove and Greenhouse Ferns, large and small, in var., Aralias, Grevilleas, Cyperus, Ficus, Ericas, Palms, Dracenas, Aspidistras, Roses, Azaleas, Carnations, Crotons, Camellias, Chrysanthemums, Cyclamen, Bouvardias, Asparagus, Araucarias, Solanums, Aspidistras, Cinerarias, Genistas, Marguerites, Geraniums, Primulas, Orange Trees, &c. Trade, send for Wholesale List. Special Retail Catalogue, free.—J. E. SMITH.

DICKSONS

HARDILY - GROWN
FOREST, FRUIT,
AND ALL OTHER
TREES & PLANTS
EVERGREENS,
ROSES, &c.

Stocks quite unequalled for
'QUALITY,' 'VARIETY,' & 'EXTENT.'
Priced Catalogues Post Free.
NURSERIES 500 ACRES.

CHESTER

THE ROYAL PARKS AND GARDENS OF LONDON.—Their History and Mode of Embellishment. With numerous Engravings, and a series of Designs of Flower Beds and Borders, with examples of Planting them effectively according to the several styles known as Carpet, Geometrical, and Sub-tropical Bedding, besides Notes on the Propagation and Culture of the Plants employed. By NATHAN COLE. Price 2/6, post free.—Office: 12, MITRE COURT CHAMBERS, FLEET STREET E.C.



Journal of Horticulture.

THURSDAY, OCTOBER 22, 1903.

Manures, Their Use and Abuse.

It is becoming more and more recognised that the land, which produces the many comforts and necessities of mankind, and in which is grown the numberless plants and trees that give so bountifully of their beautiful and utilitarian products, is but the storehouse or larder of Nature. Until the gardener, whatever his status, whether amateur or professional, looks this fact in the face, he is still on the same level as the veriest tyro in the art of manuring. One man, usually a clever one, too, in his own estimation, will say, "Give me a proper staple, and anybody can have the artificial manures." Another will so manipulate any sort of medium entrusted to his care, that so long as he gets what he knows to be needful for his crop, they will flourish and yield unfailing supplies, whether the soil in which they are grown was originally good or bad.

At the first glance, the subject of manuring may appear humdrum or commonplace; but those who have studied it in its many phases can but be strongly convinced of its increasing interest and importance. Scientists tell us there is still much to be learned, and while admitting the steady advancement of the past twenty years, they assert that we have gone merely a step or so beyond the experimental stage in the application of fertilising agents.

Very few persons are in a position to rely on unfailing supplies of yard manure, and in many small gardens this is an inconvenient medium for regular use. It is bulky, and frequently unpleasant to work amongst, especially for many people, added to these disadvantages it is not always readily obtainable. Admitting all this, we begin to see that those who advocate the use of so-called artificial manures have a fair amount of reason on their side when they declare them to be cleanly and easy to handle,

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C., and to no other person and to no other address.

and when used with discretion, in many localities far less expensive. The novice in manuring, and, it might be added, sometimes those who should know better, are apt to think because a liberal application has been of pronounced benefit in one season, that a double dressing another year will produce a return equivalent in value. This by no means follows, and is the most frequent cause of error and waste. A heavy application of farmyard manure will provide in some soils sufficient nutriment for two or three years' cropping, especially when supplemented by properly blended fertilisers. On the other hand there are thin lands overlying chalk or gravel, into which it is almost impossible to cram too much manure year after year if large and remunerative crops are to be taken from them.

Nitrate of soda and sulphate of ammonia are the two nitrogenous agents chiefly used. If large, succulent Cabbages, tender Cauliflowers, crisp, full-grown stems of Celery or vegetables of a similar character are desired, doses of one or the other of these may be given at intervals of a fortnight at the rate of half-an-ounce to an ounce per square yard, or half-a-pound to a pound per rod. It is not advisable to repeat the dressings too often, two or three times in the course of the growing period usually being found sufficient.

Plants grown in beds or pots, for their flowers, need still greater care if either the nitrate or sulphate is given. If it is desired to have gross coarse leafage with a corresponding paucity of bloom, the plants may have as much as they will bear with impunity. But as this is not, in a general way, the object of cultivators, it is best to adhere to the half-ounce per yard for border plants and half an ounce or less per gallon of water for those growing in pots. Two or three applications in the course of a season will generally suffice in producing that healthy appearance so much admired.

As is now well recognised, the two fertilisers so far mentioned as nothing, or, at least, little more than stimulants, both capable of supplying plants with material of a growth-exciting nature, usually at the expense of solidity and stamina. Having considered this, it is easier to understand how vegetables quickly and highly developed by means of either agent are made tender and unfit to withstand the rigours of wintry weather. The continuous cold and wet we so frequently experience, causes the weak tissues to quickly become a prey to damp and decay, or harsh cutting winds cause the plants to collapse, thus opening up the way for speedy decomposition.

We have here room for the exercise of considerable discretion on the part of the cultivator. There is the possibility of greatly increasing the bulk of a crop, and also of hastening its early maturity by the aid of nitrogenous manures. And for such plants as become marketable in summer and autumn, there can be no doubt as to the wisdom in using them. But when it becomes a question of those which must pass through the winter, taking late Celery or spring Broccoli as examples, there is not only danger from their use in the loss of produce, but also great loss in the waste of valuable material, which would with advantage be applied at a more opportune season.

Mention must now be made of two very different ingredients of manures—phosphates and potash. Without these, in some form or other, no manure is worthy the name. We are often told by writers that nearly all cultivated land contains sufficient potash. Yet, while admitting there may be no lack of truth in such a statement, there can be no doubt as to the benefit derivable from an application—especially to fruit trees that have been some years in bearing—of some form of readily soluble potash. It is not needful here to enter into the merits of sulphate compared with muriate of potash, or both, as against kainit. The latter for many purposes is a cheap and excellent medium, but having seen the advantages derived from the free use of the sulphate when added to bonemeal or superphosphate, I should in nearly all cases advocate its use in preference to the others.

This brings us to the now everyday use of combinations of these manures. When we know what can be, and has been, done by their aid in conjunction with moderate dressings of farmyard manure, it is impossible to avoid contemplating the wastefulness, on the one hand, of cramming land with dung, and, on the other, of allowing it to remain impoverished and unremunerative for lack of proper feeding. There is another cause of waste to which the inexperienced cultivator may easily lay himself open. He finds great benefit to his crops by an application of artificial manure, and is so well satisfied that he determines to double the dose next year. It by no means follows that his subsequent crops will be increased in a like ratio. Indeed, there may be no

increase whatever over the preceding season, and here again we have a reason for proceeding cautiously if we are wisely and economically to make use of the good things that lie to our hands.

In many gardens there are beds and borders containing herbaceous plants or Roses, in view of or in close proximity to the windows of the dwelling. It is not desirable, owing to the offence against more than one sense, to apply heavy dressings of manure of a strong nature to these; and yet, if they become poverty stricken, light dressings of crumbling, thoroughly decomposed material are of little benefit. In such cases I have seen great improvement arise both in the appearance of the plants and the quality of the flowers produced, by the use of a very simple formula. Three parts of superphosphate to one of sulphate of potash, given in spring to Rose beds after pruning (about the same time is suitable for plants in mixed borders and beds), given at the rate of 4ozs or 5ozs to the square yard, with 1oz of nitrate of soda spread over the same area when the plants have fairly commenced growth will frequently assist in a wonderful manner. It is seldom advisable to mix nitrate with the other manures. The dressing may be repeated in the course of a season.

There is nothing complicated about such a mixture as the above, and there is nothing offensive in its application; its efficacy has on many occasions been proved. That there is nothing, or very little, left over from one season to another in the earth is admitted; but the repetition is an easy and certainly not a troublesome or expensive matter. The same cannot be said of carting farmyard manure.

No article of this description can be said to be complete which omits to include lime. So much has been of late written of the part this substance plays in scientific manuring that but little need be added here. We know that it has a most beneficent action upon many soils, especially those of a strong, heavy character. It is also an efficient corrective for those which have been overcramped with rank food. Though it always seems to me a pitiful waste to so charge land with manure that lime has to be brought into use as medicine.

All who have given this subject of manuring deep consideration will agree that we owe a heavy debt to those who for many years have worked with unwearied zeal in carrying out experiments both in public and private; also for the interesting and informing reports that from time to time have been published in this connection.—PROVINCIAL.

Symbiotic Bacteria.

It is a well-known fact that nitrogen is essential to plant life. The insectivorous plants, however, can take nitrogen in the form of animal substance, and, by the secretive action of glands, absorb the nitrogenous matter necessary to their requirements. After a series of investigations with soil bacteria, a Russian experimenter, Professor Winogradsky, isolated a little circular shaped body, commonly labelled by bacteriologists Microcei, and he found that this "microbe" was able to convert ammonia into nitrous acid; but further investigations found another little body, a co-worker, that took the resulting nitrous acid, or nitrite stage, and elaborated it into a nitrate, thereby fixing the free nitrogen into the only assimilable condition for the plant.

Professor Nobbe made cultures of the varied symbiotic fungi found on different Leguminosæ, and when he applied the bacteria of one leguminous plant to a seedling of another type, the result showed that the plant did not gain to any appreciable extent; but when supplied with a culture of *its own kind*, the broad result was that the plant made a very fine growth. This would suggest that the plant had no repellant force; yet at the same time the action of those nitrifying organisms would suggest an action of affinity, seeing that one microbial form assists a species of plant, while another has no influence. A belief is current that the plant has an inherent power to facilitate the work of special organisms, and this is more probable than the idea of those bacteria roaming through the soil in search for a Legume. If it can be effectively answered that the plants have some characteristic of their own to attract the microbial member, an additional curious power in vegetation can be chronicled; but if the conditions for their short-lived activity be purely a mechanical one—a question of soil texture—then a broader field for these microbial types can be ensured, and a great power will be placed in the hands of horticulturists. Until these aspects of the problem have been determined in the laboratory, the question of practically applying bacterial cultures to the soil (as by the application of nitrugin) cannot be determined.—A. O'NEILL.



Cypripedium Lawrencianum Gratrixianum.

This is a very pretty *Cypripedium*, formal in shape nevertheless. It is comparable to *C. Lawrencianum Hyeatum*, which is coloured green and white; but our present subject has in addition a pale rose tint on the petals and sepals. When shown by T. M. Crook, Esq., of Hoghton, near Preston, before the R.H.S. Orchid Committee on September 16, it received an award of merit. Our figure is from a drawing by Mr. George Shayler.

The Week's Cultural Notes.

Propagation of Orchids by the removal of back breaks and potting these on is a recognised method of procedure, but one often gone about in the wrong way. They are usually taken off in spring and potted up at once, disturbing root and branch, so to speak, at the same time. Many plants may be prepared for this disturbance by severing the rhizome now and leaving the several portions to grow alongside the parent plant until spring. Besides propagating purposes, this cutting of the rhizome will induce the formation of back breaks, that serve to make a specimen more equally furnished with growths.

Late autumn is also the best time for this latter operation, the dormant buds plumping up during winter and being ready to start with the rest in spring. If delayed until the latter season, the growths start late in consequence, and are behind all the year. *Laelia superbiens* is a case in point where cutting the rhizome is productive of good results. As imported, this is one of the most difficult species to get into shape, untidy, straggling specimens being the rule; but if back breaks are produced by the above means, and the plants pulled into shape a little at every repotting, this, and the removal of the old and shapeless bulb, will gradually induce a more tidy plant and better habit. There are many other plants that may be improved in appearance by these means; in fact, the great majority of pseudo-bulbous species.

But strong plants only must be chosen; for weak, badly rooted specimens may be seriously injured by the cutting. Nor should rare or valuable specimens be operated upon until some experience has been gained with cheaper and commoner sorts. In the case of small growing *Cattleyas*, or *Laelias*, *Odontoglossums*, and dwarf species generally, it is advisable to notch the rhizome rather deeply at first, to check the flow of sap, but to leave the actual severance until roots are forming on the part to be severed.

Naturally, after the disturbance and check to the plant following this cutting, a careful régime is necessary. Both the parent plant and the offshoot must be kept rather warmer and closer, not exposed to draughts or cold air while in their convalescent state. As the roots obtain a fresh hold, they may gradually be returned to the ordinary growing quarters and treated similarly to established plants. Before commencing any of these operations it is necessary, of course, to consider whether or not the value of the plant will be enhanced by them. They must not be rushed into just for the sake of experimenting, and it should be kept in mind that a fine, healthy specimen of a good form is always worth more than a number of scraggy pieces.—H. R. R.

Oak Leaves from Mountain Ledges.

It may be news to many folks when we say that a Journal reader carries on a business amongst the Welsh mountains, his work consisting in gathering pure Oak leaves from the ledges of rock in the mountain woods, overlooking the sea at Trawsfynydd, R.S.O., Merionethshire. Our friend is Alfred Johnson, F.R.H.S. (Bala Sphagnum Supply), who employs quite a number of men at this season.

Phalænopsis amabilis Rimestadiana.

The genus *Phalænopsis* is unquestionably among the finest Orchids yet introduced, and although nearly all varieties are beautiful, the subject of our notes is considered decidedly the best. The subject, *Phalænopsis amabilis Rimestadiana*, was imported from Java, where it was found growing at a higher elevation than any other species of *Phalænopsis*, consequently it can be successfully grown in the *Cattleya* house, as it does not require the heat of other varieties. Its free growing habit and the freedom with which it produces its large flowers make it quite an acquisition to our Orchid houses. This variety has been quite extensively distributed throughout England and the continent of Europe during the past year. It is easily distinguished from the Bornean variety by its light green foliage and dark green flower spike, whereas in the Bornean variety the stem is yellow. The plant (says the "American Florist") has just flowered in the collection of Dr. R. Schiffmann, St. Paul, Minn., U.S.A.

Storing Pollen.

In the crossing and hybridising of Orchids, Daffodils, or other flowering plants, the hybridist has many times intended to make certain thought-out crosses, but waits to find that the pollen and the stigma of two chosen agents are far removed in the date of their necessary adaptability. What has he (or she) to do? In the case of Daffodils, the pollen has often to be kept for two or three weeks, and it still remains vital. We learn from the "Orchid Review" (October number) that the pollen-masses in the flowers of *Cattleyas* and some other genera of Orchids can also be excised and stored for quite extended periods without losing their fertilising power. We may be allowed to quote what Emily Thwaites says on pages 292 and 293 of the "Review." In opening, she writes:—"I tried various means, and the one I

have found most successful seems too simple to write about. It is to remove the pollen carefully from the flower; wrap in the blue tissue paper florists use; write name and date on, and put in a tin box." She then names certain species whose pollinia were tried.

Continuing:—"I might say, too, that in raising the plants true from seed, it is not wise to use a flower's own pollen, but rather to get it from another plant of the same variety. For instance, last November I fertilised two flowers of *Cattleya labiata Amesiana*, one with its own pollen, and one with *labiata R.I. Measures* variety. The former stayed on six months only, and on being sown proved all chaff; the other has gone on all right. Then *Cattleya Trianae alba*, self-fertilised, burst at six months, and we fear there is little chance of the seed being good, while *Cattleya Mossiae Wageri* fertilised with its own pollen, though hanging throughout the year, was very bad seed, and we only got a few seedlings.

At the same time I ought to say that *Dendrobium nobile virginale*, self-fertilised, resulted in a good pod of seed, and we got a good many seedlings up.

"Of all the pollen we have used, too, taking it all round, I think that that of *Brassavola Digbyana* has proved the most vigorous. It gives splendid results; even when put on *Cattleya Dowiana aurea* we got a fine pod of seed, and aureas as a rule are very bad seed parents."



C. Lawrencianum Gratrixianum.



Hints to Exhibitors.

(Concluded from p. 352.)

Having written at some length on the errors committed by exhibitors in selecting their blooms, and their methods of procedure, a hint or two on staging may be useful to those who are about to enter the exhibition arena for the first time. Even to some exhibitors who have spent many years in the show tents, a little knowledge would be beneficial if they would only open their eyes to personal faults. Fortunately, that crude method of staging Japanese blooms upon the orthodox stand is fast becoming obsolete; in fact, if executives generally could adopt the "vase" method of staging the Japanese section entirely, a better effect would be produced. The full value of this type of Chrysanthemum would be displayed in its true character, and visitors would have less cause to complain than at present.

I am quite aware that such a drastic change as this suggested means much more to many societies than the mere idea of change. The procuring of suitable vases means much expense to a society that can at the present moment only just present a clean balance-sheet. Exhibitors cannot, of course, be expected to provide their own vases. The difficulty, too, of transit of blooms on long stems is increased over that where the orthodox stand only is employed. In arranging the blooms in either vases or stands, the great point is to avoid overcrowding; arrange every bloom in such a manner that all its points of excellence are displayed fully. When arranging in stands by the aid of cups and tubes, an even stand should be the aim of an exhibitor in size, colour, arrangement, and freshness. Some exhibitors place two large blooms side by side because the colour harmonises better; but this latter point does not receive the same consideration from judges as some imagine it ought. Of course, where two competing stands are close in point of merit, then harmony of colour scores a point.

In the ordinary "vase" classes, seldom are mixed varieties placed in the same vase. Generally three or five blooms of one sort are required, and for producing a pleasing effect this arrangement has much to recommend it. Some cut the stems too long, which renders the blooms somewhat gaunt in appearance, especially if they be below medium size; others err in the opposite direction by giving the blooms a "dumpy" appearance, particularly when they are large examples. The point is to display the blooms with just sufficient foliage to give effect to the blooms, and by all means so arrange the stems that the petals of one bloom in the same vase do not overlap those of its neighbour—a too common fault, even by the leading exhibitors.

Naming the blooms is very important to all concerned. Exhibitors, in the interest of nurserymen, should be particular in this, as it saves much annoyance to the cultivator next season, and a loss of trade to the vendor also. Visitors to the autumn shows see and admire certain kinds; they order them from some specialist, who supplies the sorts ordered, and, when they bloom the following season, are found different to those seen at the show in question, because the exhibitor had them improperly named.

Instances of wrong naming cannot disqualify an exhibitor, but they prove very annoying to those whose experience is not superior in judgment or knowledge. The manner in which the blooms are named at many shows needs strong condemnation, for so badly are the names spelt and written, that it is with difficulty they can be read at all. In the crush that often prevails at shows, this is anything but pleasant for the visitor. Exhibitors should bear in mind that they, important as they are, are not the only persons the society has to cater for.

Another point I would draw attention to is the all too common plan that some exhibitors—disappointed ones generally—have of standing in front of an exhibit, arguing points of quality (in none too low a tone at times), to the discomfort of visitors, and not with credit to themselves. I quite forgot to say that the best system of naming is that of small printed cards, firmly placed in front of each bloom or vase. In the case of naming in stands, the three names should be placed in front of each row of three blooms in the order of arrangement. A cheap yet efficient method of naming is that of writing the names clearly on an ordinary envelope, the flap being used for sticking it to the board in front of the blooms. The worst plan of naming is that of writing all the names closely together on a half sheet of note paper, laying it in front of the stand to be pushed on to the floor by the first crush of visitors.

One more suggestion to the exhibitor, then I must close:

avoid being late in staging. Not only does this limit the opportunity of the exhibitor to put the finishing touches to his blooms, but it is a source of serious importance to judges to be prevented commencing their labours in reasonable time, and to the officials also in presenting the room in a tidy appearance to the visitors. If judges do make some slight mistakes owing to a lack of time to examine sufficiently the exhibits, how, then, can they be blamed in consequence?—E. MOLYNEUX, V.M.H.

Feeding.

The plants will receive great benefit from judicious feeding. When the pots are full of roots it is essential to afford some help in addition to the supplies of water. Clear soot water may be given frequently, alternating this stimulant with others made from sheep, cow, and horse manure. A peck of either of the above may be placed in a bag and sunk in about twenty-five gallons of water in a tub. Soot water is made clear by mixing in a shovelful of lime with the above quantity, and allow to stand until clear. The concentrated artificial manures are excellent, and ought to be used according to the vendor's directions supplied with each tin or bag. Their too frequent use is not to be recommended, nor are the special or nitrogenous manures, such as nitrate of soda and sulphate of ammonia, to be used indiscriminately. The systematic applications of all stimulants should cease when the blooms have well developed, giving the plants only clear water. Should the soil at any time become drier than usual, clear water only ought to be used to moisten it, following afterwards with any manurial applications.—E. D. S.

Early Chrysanthemums on Tayside.

Although not possessing the massive appearance of the exhibition Japanese varieties, which rejoice the heart of the enthusiastic competitor, there is a grace and neatness about the early flowering Chrysanthemums which commends them to the ordinary admirer of these now indispensable flowers. This was forcibly brought home to me a few days ago when visiting the beautiful gardens of Sir Robert Pullar, at Tayside, Perth. There I saw in the conservatory a number of plants growing in pots 5½ in in diameter, neat little specimens, 15 in to 18 in in height, well furnished with foliage down to the pot, and each carrying ten beautiful blooms averaging five or six inches in diameter. Plants of this description are much more useful for decorative work than the long, leggy specimens grown to produce exhibition blooms. The varieties grown at Tayside are principally Mytchett White and Goacher's Crimson, both of which seemed particularly amenable to this style of culture, forming perfect little specimens. Asking Mr. McDonald as to the treatment given, his reply was brief and to the point, viz., secure good cuttings, root in the usual way, pinch when three inches high, and again after the plants have made another three inches of growth, then secure the first bud, and do not feed heavily.

Growing in the open, we observed these two varieties doing remarkably well. Our experience of Mytchett White led us to conclude that it was an exceedingly shy grower; but at Tayside it gives no trouble, being quite robust in growth and very floriferous. Parisiana, growing side by side with it, was not nearly so fine, despite the high recommendations with which it was sent out. Another very fine variety we noticed is Craigmillar, a yellow pompon, superior in every way to Flora or Précocité. This is a decided acquisition, and well worthy of a place amongst early flowering sorts.—ALBYN.

Official Catalogue of the N.C.S.

A supplement to the National Chrysanthemum Society's Jubilee Edition has been issued, bringing up matters connected with the Chrysanthemum to 1903. To those who do not possess or know anything about the N.C.S. Catalogue, we would mention that there is an alphabetical list of Chrysanthemums raised or sent out since the spring of 1896, with their sections indicated and their colours described. There are also selected lists of every section, apart from the complete list. It is published at 1s. Apply to R. Dean, Ranelagh Road, Ealing.

BATTERSEA PARK annual exhibition of Chrysanthemums opened last week. The Chrysanthemum House, near the Albert Bridge entrance to the park, contains thousands of magnificent blossoms.

A GREAT CALIFORNIAN SEED FARM.—The "Scientific American" supplement, No. 1,443, August 29, gives a fine illustrated account of the seed farms of C. C. Morse and Company, Santa Clara, Cal.

THE WORLD'S FAIR AT ST. LOUIS.—The propagating department at the World's Fair grounds is a busy place just now. Two hundred thousand plants are already on hand, with thirty men making cuttings. It is estimated that four million plants will be used in the landscape department. About one million Pansies and Bellis will be used in the early spring. The range of hot-beds is being piped for steam heating.



Hedysarum multijugum.

Hedysarum multijugum is one of our prettiest of hardy flowering shrubs. It was introduced from China about 1880, is perfectly hardy, and blooms in June. The flowers are borne in clusters, and are of a very bright carmine red. They are borne well above the foliage, and can therefore be seen a long way off. The bushes are round and dense, and the branches, as well as the under side of the foliage, white with silvery grey hair.

Pentas carnea.

One of the plants which should be revived is *Pentas carnea*, according to "Die Gartenwelt." It belongs to the Rubiaceæ, and comes from tropical Africa. It is a free bloomer. Not in the summer only in a cool house or sheltered spot in the garden does it develop its magnificent, rosy lilac, upright clusters of flowers, but in the fall and winter also it is perpetually in bloom. It is easily raised from seeds or cuttings, and thrives best in a rich, sandy soil.

The New Potato, Sutton's Discovery.

We have received the following letters:—

"Notwithstanding such a bad season, I cannot speak too highly of 'Discovery' Potato. In the 11b, we had eleven Potatoes which we cut up into sets of one eye each. We have now lifted 74lb of good sound tubers. With us this is a splendid crop for such a terrible year."—Mr. G. CARPENTER, The Gardens, West Hall, Byfleet.

"I have this week dug the produce of 11b of seed of the new Potato, 'Discovery.' The result is exactly 50lb, and not one diseased tuber, although they have been perfectly saturated with wet the whole season, and with heavy soil combined. I think this is a pretty fair test, and I have not subjected them to any artificial treatment. The eating qualities I consider excellent, and wish I had my whole Potato breaks planted with the same this disastrous season."—Mr. G. R. GEORGE, The Gardens, Wavendon House, Woburn.

Aster, Coombe-Fishacre White.

The many who appreciate the valuable Starwort (perennial Aster) called Coombe-Fishacre, which makes a pretty bush in the garden with its multitude of flowers, will do well to secure the white one named Coombe-Fishacre White. Like the other it was raised by Mr. T. H. Archer-Hind, of Coombe-Fishacre House, Newton Abbot. It may be said to be a white counterpart of the original one, and it makes a capital companion to it. Mr. Archer-Hind is still raising new Starworts, and a box of flowers of his new seedlings, as yet unnamed, reached me the other day. It was difficult to select from so many beautiful ones, but I endeavoured to do so, to my own satisfaction at least, and I hope to see some of them in my garden next year. It is as well to remark that Mr. Archer-Hind, like the writer, does not sell plants.—S. ARNOTT.

Hibiscus syriacus.

A good sized specimen of this beautiful autumn flowering shrub flowered profusely here last season. I do not think this is a very common plant in the North of England, but is grown more in the South, where it is warmer. It is quite hardy, having withstood most severe winters without protection; but the wood must be well ripened, or it will not bloom very well. This shrub has a very nice habit, the branches growing upright, giving it a compact outline; the leaves, which are wedge shaped, are three lobed and toothed. Ours is the single blue variety, with claret coloured strips, catalogued under the name of Cœleste. There are many forms of it in cultivation, some with double flowers, and in a variety of colours. Its flowering time is August and September. A well drained and rather light soil is best, and it should have a sunny position, so that the wood may get well ripened. It is sometimes found under the name *Althæa frutex*—J. S. UPEX, Yorks.

"The Pierson Fern."

Much has been written in praise of this exceedingly handsome Fern—*Nephrolepis Piersoni*. It is an American variety (or species?), and has come to this country through Mr. H. B. May, of Edmonton, London. He staged well grown, nicely crested plants at a recent meeting. From seeing those plants, we can thoroughly recommend this as a valuable addition to decorative Ferns, and for ornamental uses. It received "the first and only gold medal ever given by the American Society of Florists to any plant."

Culinary Pea, Alderman.

Out of a very large number of varieties grown this season, this has proved itself indispensable in every way. Its heavy cropping qualities, coupled with the extra large pods filled with peas of the most delicious flavour, being eminently suitable to all who have a large demand made upon their resources. Growing to a height of 5ft it may not be suitable for those who are short of space and sticks; but where at all possible it is worth an effort to try it. As an exhibition variety I consider it of the finest, possessing the highest points of colour, size, and flavour.—R.

Fansies.

The colours exhibited by Pansies are most extraordinary. Some are as near black as flowers can be. The richest purples are common, with clear yellow, intense violets, lavenders, tender dove colours, rich maroons and browns. On the lower petal, which in the Violets is hollowed behind into a nectar-bearing spur, there can be usually seen, when the ground tint is not too dark to obscure them, the so-called "guiding lines" to which Sprengel first called attention. He claimed for them a significance which science has of late reaffirmed, maintaining that they serve as so many clues or lines of direction to assist insects in finding the nectar.—("American Botanist.")

Potato, The Crofter.

This fine white, round maincrop Potato was sent out by Messrs. Dobbie, of Rothesay, in 1898, and it is singular that it has not been much more heard of in the neighbourhood of Lancashire and Cheshire. I have no hesitation in writing this note after seeing many varieties lifted and cooked on the same day, the "Crofter" turning up with tubers beautifully white, extremely heavy, and an absence of small ones. On its being cooked one could not have wished for a finer sample, floury, and with a flavour such as we used to get in some of the older varieties. The flesh is firm, and skin slightly netted, shallow in the eye, and of much value in an exhibition collection.—R. P. R.

Experimental Potato Growing.

For many years the esteemed editor of the "Ormskirk Advertiser," Mr. W. L. Hutton, has offered valuable prizes at the Liverpool Grain, Root, and Fruit Show, for the newest varieties of Potatoes. These he undertakes to have planted the following season with a view to their being tested for market purposes. The land on which they are planted is of a strong nature, situated at Aughton, near Ormskirk, and is a good Potato growing district. Mr. Henry Jenkinson, of Bold Lane, Aughton, has had the stock under his charge this season, and every facility for intelligent cultivation has been afforded.

In such a season as the present, the growth has been abundant; but owing to the very wet weather disease has been unusually prevalent. The lifting of the crop has been most carefully done, and the weighing thoroughly carried out with the following results:—

Name.	Weight of seed in lbs.	Weight produced.		
		Sound.	Small.	Diseased.
Early May	2	11	2	8
New Majestic	3½	28	1	16
Edward VII.	2½	26	2	14
Fylde Wonder	3	41	2½	13
Coronation Kidney	2½	28	1	17
Maddock's Excelsior	2½	39	2	7
Enterprise	3	38	3	12
Carltonians	2½	21	2	6
Niven's Table Talk	3½	51	4	26
General Buller	2½	17	2	9
Seedling (unnamed)	2½	29	2	5
	30	332	23½	129

"Table Talk" proved itself a good cropper, excellent in shape, and of fine quality.—R. P. R.

County Council Instruction in Horticulture.

Continuing the series begun in April of this year, the present notes briefly summarise the work being undertaken by the Oxfordshire County Council, whose horticultural instructor is Mr. Samuel Heaton. By abridging the annual report of the Technical Instruction Committee for the year 1902-3, as presented to the Oxfordshire County Council, a fair outline of the work will be gleaned. The report is as follows:—

Oxfordshire.

"HORTICULTURAL LECTURES, TRIAL ALLOTMENTS, &c.

"In the past year, 200 lectures have been delivered by Mr. S. Heaton, the staff instructor, attended by 3,435 auditors. These included single lectures, short courses, and three long courses of lectures and demonstrations in preparation for the Royal Horticultural Society's examination. These latter were held at Adderbury, Bicester, and Chipping Norton. Although the attendance at the lectures was good, few students (only eight in all) sat for the examination on April 22. The results of the examination are satisfactory; all eight candidates passed.



Mr. S. Heaton.

"Thirty-four demonstrations have been given in gardens, allotments, &c., attended by 347 persons. Growing interest is being exhibited by allotment holders and cottage gardeners in the work of the staff instructor, and information is constantly asked for by them as to the cultivation of their crops, the destruction of insect and fungoid pests, and the eradication of weeds, so that the visits to 190 allotments and 118 gardens have proved of considerable value. Reports of the trial allotments, leaflets on insect pests, diseases, manures and manuring, &c., have been widely distributed among the cottagers. During the year, also, 255 allotments have been judged, and eleven shows have been visited by the staff instructor as judge. A short course of Nature-Study excursions for teachers has been planned, and a party of some twenty to twenty-four teachers went with the instructor to the gardens and woods of Heythrop, Blenheim, and Middleton Stoney. Full reports of the work of each of the nine trial allotments in the county were printed and widely circulated.

"The annual exhibition of the produce grown on these trial allotments was held on September 18, 1902, in St. John's College, Oxford, when Mr. W. Hovell acted as judge. Throughout the summer the plots had been inspected several times, for the special purpose of awarding marks for (a) general cleanliness, (b) system of cropping, (c) methods of cultivation, (d) respective merits of crops, and (e) the financial position of the individual plots. . . . Demonstrations in grafting and budding have been given on most of these centres, and considerable interest has been taken in the operations by the cottage and allotment gardeners of the neighbourhood.

"PRACTICE PLOTS.

"The 'Practice Plot' scheme, whereby any allotment holder may receive advice as to his methods of cultivation, makes slow progress. Those working under the scheme are well satisfied, and much good work has been done, but the allotment holders are diffident of writing reports. The following report, however,

will show that the advice given is appreciated: 'I beg to inform you that the yield (of Wheat) was very satisfactory. When threshed the amount was seven bushels of corn (grown on one chain and a quarter of allotment ground)—a very good sample, too, as the flour makes good, sound, and sweet bread. I may add that my yield of Wheat was the best in the allotments this year (1902). (Signed). GEORGE BERRY, North Newington.'

The Committee's report gives a tabular statement to show the work of the staff instructor during the year, but we must be content with the gross summary: "Number of lectures given, 200; total attendances, 3,435; number of demonstrations given, 34; total attendances, 347; visits to trial allotments, 69; gardens visited, 118; allotments visited, 190; gardens and allotments judged, 255; shows judged, 11."

After glancing through the foregoing report, it will be patent to everybody that Mr. Heaton is well and busily occupied; and for the guidance of the allotment holders and amateurs he has had prepared a "Calendar of Garden Operations" in leaflet form.

Mr. S. Heaton.

It is just over forty years since Mr. Heaton was born at Keighley, in Yorkshire, to wit, August 6, 1863. He entered the establishment of the late Sir Isaac Holden, Bart., at Oakworth House, in the year 1878, at fifteen years of age. This place was then in the making, and here experience was gained in land draining, reservoir making, rockery building, and landscape gardening. Hard practical work was the order of the day; and through the kindness of the architect, the late Mr. George Smith, books on landscape gardening, surveying, and allied subjects were studied.

Over seven years were spent here in acquiring practical knowledge in the cultivation of fruits, flowers, vegetables, and plants, under Mr. Halliwell Shaw, a thoroughly practical gardener, whose motto and practice was WORK. He was, indeed, a good teacher.

The glass department was very extensive, as will be seen from the following extract, which is from the "Bradford Weekly Telegraph" of Saturday, March 31, 1883: "It is the winter garden that constitutes the special and particular charm, and when it is remembered that the bare formation cost about £30,000, some idea may be obtained of its noble proportions. In addition to this large 'garden,' whose interior embraces an area of about half an acre, there are also enormous ranges of glass houses, forty in all, covering an area of about two acres, and requiring a series of over a dozen boilers and tens of thousands of feet of hot-water piping to keep them at the required temperature. Opening immediately from the end of the winter garden is a lantern-roofed house devoted to Muscat Grapes, and connected with this are six other vineries arranged so as to give continuous croppings all the year round.

"Right and left of the winter gardens are Orchid houses and greenhouses. There is a good collection of rare and valuable Orchids, and the Rose house, Camellia, Azalea and Heath houses, &c., contain many handsome and well grown specimens. The fine Peach, Melon, and Cucumber houses are well stocked. The vineries contain 4,000 feet of four-inch pipes; the fine pits and plant preparing houses, &c., 7,000 feet; the stoves adjoining the winter garden, 11,000 feet; the winter garden itself, 7,500 feet."

While at Oakworth House, opportunity was taken of the science and art classes, both at Oakworth and Keighley Mechanics' Institutes, to acquire instruction in drawing (geometry, freehand, &c.), botany, agriculture, and mathematics, which Mr. Heaton must have since found very useful.

In 1886 a move was made to Astley Bank Gardens, Darwen, under a Mr. Charles Grey, an excellent vegetable and fruit grower. From here, Dileworth House Gardens, Longridge, was taken charge of, followed by Claye House Gardens, Halifax, and Elmwood House Gardens, Batley. During these appointments exhibiting was tried, and successfully.

In 1891 a move was made to Leeds, to take charge of the Yorkshire School of Horticulture in the theory and practice of gardening; and in 1893 our friend was appointed horticultural instructor for the Isle of Wight County Council, but resigned that post in January, 1901, when he commenced duties under the Oxfordshire County Council as Rural Agricultural Instructor. Thus the record of a strenuous worker, a man as eager to get as to impart knowledge; and both in his teachings and his studies he goes systematically to work. Mr. Heaton is not merely a theorist and science scholar; he is practical above all, and unless that is a qualification of a C.C. instructor, his own time and that of others is largely wasted.

When superintending practical work in the open-air, as, for example, trenching, pruning, making alleys, or planting on allotments, Mr. Heaton cannot tolerate the deliberate, half-willing worker; he will somewhat sharply ask to have the spade (or other tool), and with vim and skill proceeds to "ocularly demonstrate" how the business *ought* to be undertaken. And that is just what the majority of the country working-men want; they do enjoy "elbow-grease," especially when it comes from the man who is set over them to give light and leading.

We give a synopsis of his session's work at the Batley Technical

School, the table being drawn up for the prospectus in the following manner:—

Date and Time.	Teacher.	Fees.
Thursdays, 7 p.m. to 9.30. Commencing Sept. 15, 1892.	MR. S. HEATON. Late Gardener to Lieut.-Col. Sheard.	3/- per Term. 5/- per Session.
Classification of Plants The Organs of Plants Soils:—Their Composition, &c. Organic Manures Inorganic Manures Germination of Seed Propagation of Plants Fertilisation Cropping Land Window Gardening Garden Implements and Utensils	Judging Fruit, Flowers, &c. Ferns: their culture, &c. Orchids: " Vegetables: " Stove Plants: " Hardy Fruits: " Forced Fruits: " Bulbs and tubers: " Foliage Plants: " Flowering Plants: " Climbing Plants: " Heating Apparatus	Wood, and its effects on the prolificness of plants Horticultural Buildings, &c. Floral Decorations School Gardening Cottage Gardening Roots, and their uses Chemistry & Cultivation of Plants Elementary Landscape Gardening

As judging forms a part of the instructor's business, and, moreover, as point-judging is so generally being practised, Mr. Heaton has produced what is named Heaton's Horticultural Register, which we presume is sold by himself. The book is arranged with ruled spaces for Division, Class, Points, &c., and "particulars" can be written on the back of each slip. The points can be given for each of four prizewinners, and a slip can be torn out for the secretary's use.

Insects as Garden Adornments.

There cannot be any doubt, I think, that one result of the wet summer of 1903 has been a great reduction in the number of caterpillars. It might be a question which kind suffered the more from the excessive moisture and the frequent winds, the caterpillars feeding on trees and shrubs or those living near the surface of the soil. Forced from their hold on

branches or twigs by rough weather, those feeding exposed have often had difficulty in getting back to their food, while the less elevated species have had such a drenching as proved fatal by enfeebling them, or they were so exposed that insect-eating birds devoured them. Then, before they had time to deposit eggs in the spring, early moths of the Noctua tribe were cut off by the keen winds, and many broods, usually seen, did not put in an appearance. Some caterpillars, however, that could brave the ungenial weather, got on well, owing to the abundance of green food. Still, the scarcity of numerous species that occur in gardens, orchards and shrubberies was remarkable: probably it will lead to a diminution next year too.

We have still to look at some beautiful moths belonging to the Noctua tribe, that have not yet been noticed in our present series, but ought not to be passed by. Nearly all the caterpillars of this tribe have smooth skins, often velvet. the exception being the genus *Acronycta*, already referred to, where most of the caterpillars are very hairy. The fact that many of those caterpillars are hairy which live from autumn to spring suggests that hair or down furnishes some protection from rough and damp weather. Some of the Noctua caterpillars hibernate, either hiding in low herbage or, more frequently, going underground, probably suffering no ill effects from ordinary rain. Others feed on vegetables till autumn is well advanced; these are apt to escape observation by suddenly dropping, rolled into a ring.

The caterpillar of the Angle-shades Moth (*Phlogophora meticulosa*) sometimes does this; more often it simply doubles itself if alarmed. It is a rather leech-like caterpillar, the head and near segments being small, the body green or olive brown, with numerous white dots and three lines. There are two broods. One in April and May resorts to Primroses, young Chrysanthemums, and various live plants; the autumn brood is found on Hollyhocks, Dahlias, Nasturtiums, or plants that are handy. The moth is out about June, then again at the end of September. If not brightly coloured, it is decidedly a handsome insect; the dark brown wings are



Richardson & Co.

Conservatory at Smedley's Hydropathic, Matlock. (See page 376.)

touched with green and grey, and crossed by angled markings. It is abundant throughout our islands.

A less, rather similar species is called the Small Angle-shades (*Euplexia lucipora*). This is a June moth of deeper colours, having two conspicuous white spots. We find, later in the year, the green, dark-lined caterpillar feeding upon the Brake Fern or on Nettles.

To the species which books now call the Green Brindled Crescent, or *Miselia oxyacantha*, the old entomologists gave the name of "Glory of Ealing"—evidently the moth was first noticed near what was a pretty village a century ago. Since then the moth has turned up in many places, and appears in gardens during September, because the caterpillar usually feeds in early summer upon the Hawthorn. This is rather dull-looking, grey brown, having a few white dots. The moth has a ground colour of reddish brown, which is marbled, and upon it are scales of metallic green. Its eyes are very phosphorescent, or electric, when it has just emerged from the chrysalis and is exploring the evening flowers.

Another showy September moth, chiefly seen in South England, and a not unusual Cockney species, is the large *Ranunculus* Moth (*Polia flavocincta*). I cannot account for its English name, unless, indeed, it has been taken as caterpillar upon some species of *Ranunculus*. But this, which is pale green, having white stripes and dots, occurs mostly upon Chickweed and Groundsel in the spring; also it has been taken off garden Mints. The general colour of the moth is smoky grey; upon this are darker marblings. Its special beauty is a row of orange spots on each wing, containing black arrowheads, which point towards the base of the wings.

When other flowers are getting few the Ivy bloom attracts the autumn moths, and amongst these, hovering on walls or banks, may be seen the species oddly called the Marvel-du-jour, or *Miselia opulina*, the latter, by-the-bye, suggesting that it is also a spring insect at times. Certainly, it is a handsome moth, the pale green forewings exhibiting markings of black and white, which occasionally run into a band. The head and thorax are also light-coloured, but the hind wings are dark. By searching Oaks, its caterpillar has been taken about June: it is greenish grey, reddish on the back, the head displays in front a funny black mark X-shaped.

We might say that the bulk of these Noctuas hide by day amidst the herbage, in shrubs, or they rest upon the branches of trees, but some prefer palings, where they sit quietly and usually allow us to inspect them without stirring from their position.

Palings or low walls in June and July exhibit the Grey Archer (*Aplecta nebulura*), a fair-sized moth, varying in colour from whitish to dark grey, marbled and mottled, showing usually two distinct spots. Its brown, rather stout, and velvety caterpillar lives on low plants during autumn, and after its winter sleep mounts Sallow, Whitethorn, or Birch, devouring the young leaves.

Less common and more beautiful is the Silvery Archer (*A. tincta*), which has been taken in gardens near London: the forewings are pearly and somewhat silvery; upon the ground is a band of brown and sundry streaks, the body is crested. Entomologists hunt for the caterpillar on Birch trees during autumn. It has a small head, and is pale brown sprinkled with black and white dots. There is also a Green Archer Moth, grey green, black and white; but the grandest species of the genus is the Great Brocade, or *A. occulta*, which turns up occasionally all over England, and which is dark brown or almost black, with a grey pattern, which probably suggested the English name. Its caterpillar has been taken off Primroses in spring, or on kindred plants, but is not easily found, since it hides during the day.

Sometimes the caterpillar of a species is much handsomer than the mature insect, and this is the case with the Sword-grass (*Calocampa exoleta*). The moth frequently visits the Ivy in September or October, and in spring it appears upon the Sallows. It is a fine moth, though it only exhibits dull grey or brown colours, but the caterpillar is very conspicuous, and must, one thinks, often be seized by birds. It reposes, after eating, in full view upon the stem of some Sedge, a Scabious, or the Bladder Campion. The general colour is green. On each side are four stripes; two are white and narrow, two broader are yellow and brilliant red; it is also sprinkled with dots of black and red.

Again, we have a family of moths that are called "Sharks," of moderate size, and harmless enough. I can only conjecture the name was given because the caterpillars sometimes appear in companies; but I do not think they are unusually ravenous. Amongst the species there are some

with showy caterpillars, the moths being dull in colour. The common "Shark" (*Cucullis umbratica*) sits upon palings in June, often escaping notice. Its caterpillar feeds at night, hiding by day on or near the earth. Lettuces and Sow-thistles are its food; in colour it is deep brown, delicately shagreened with grey, and having orange spots on some of the segments. Some seasons this caterpillar has been rather damaging to garden Lettuces, but lately it has occurred less plentifully. Then the Aster Shark (*C. Asteris*) has a pretty caterpillar; it is olive-green, and striped with blue, yellow, and white. It is found during the autumn on China Asters, also on the Golden Rod in woods.

We must not linger amongst these moths, and will content ourselves with the mention of two more, the Herald Moth—regarded as a pioneer of spring, which hibernates frequently in garden sheds and toolhouses, and occasionally in stables. It is grey, brown and orange in colour. The other is the Hebrew Character, another early species, exhibiting a curious design on the wings. Its body has long scales. Many more handsome species may be found in the list, as "Rustics," "Gothics," "Brocades," and their kindred.—ENTOMOLOGIST.

Hardy Shrubs for Forcing.

If not already done, those shrubs intended for forcing during the coming season should at once be picked out, lifted, and potted up in some good loam without delay. This done, plunge them in ashes outside, to protect the pots from frosts, until they are required. Those plants that have remained in pots since they were forced last season, should have some of the old soil picked off, and receive a top-dressing of loam and cow dung.

In hardy shrub forcing a great mistake is often made by introducing the plants into too high a temperature for a start; the result is, either the flower buds go blind, or if they come to maturity are very unsatisfactory. Take the plants inside in good time, and allow them to come on gently in a day temperature of 50deg to 55deg; syringe them daily to assist them in starting into growth. Raise the temperature as soon as they are nicely started, to 60deg to 65deg, and later—if occasion demands it—to 70deg by day. As soon as the first blooms are observed to expand, remove the plants out of the high temperature, and gradually inure them to that prevailing in the conservatory or house in which it is intended to arrange them.

One of the most popular plants for forcing is the *Azalea mollis*. Though comparatively useless as cut blooms they are in great demand for the conservatory, which place their glowing tints brighten up considerably. The yellow variety, Anthony Koster, is generally admitted to be finest *Azalea mollis*; while *occidentalis* and *Daviesi* run very close for second honours.

Closely allied to the *Azaleas* are *Rhododendrons* [*Azaleas* are now botanically classed as *Rhododendrons*.—Ed.]. Although when in bloom they do not present such a profuse mass of flower as do the *Azaleas*, the *Rhododendrons* are of greater utility for cut bloom, which is an important factor in most establishments. To attempt to pick out the best varieties is a rather difficult matter, as tastes vary so, and the range of colour embraced is so wide. A few tried and reliable sorts for forcing may be enumerated instead: *Cynthia* (rose colour), *Purity*, *John Waterer* (carmine), *Lord Derby* (dark; spotted), *Mrs. John Waterer* (bright crimson), and *Mrs. T. Agnew* (white).

With *Lilacs*, some experience a difficulty in successfully bringing the plants into bloom. Immature wood is sometimes the cause of this; but very often the cause can be ascribed to introducing the plants into too high a temperature at the commencement. *Marie Legrange*, *Charles X.*, *Souvenir de L. Späth*—a magnificent variety—and *alba grandiflora* are among the best for forcing. The *Guelder Rose* (*Viburnum Opulus* and *V. plicatum*) are worthy of a place in the forcing house. Their large, snow white trusses are both showy and useful.

Other shrubs suitable for forcing are *Laburnum*, *Staphylea colchica*, *Weigela rosea* and *W. amabilis*, *Wistaria sinensis*, *Deutzia gracilis* and *D. candidissima*, *Prunus sinensis*, and *Spiræa Thunbergi*, *S. Bumalda*, and *S. Reevesiana*. A few plants of *Acer Negundo variegata*, and *A. aurea* should, if space permits, be also included; their bright and picturesque foliage is very attractive.—G. R., Waddesdon.

NORTHERN STAR POTATO.—It is stated that a market gardener of Daventry (Northampton), Mr. W. L. Bird, has obtained 932lbs of Northern Star Potatoes from 1lb of seed.

THE POTATO BOOM.—On Tuesday, the 22nd ult., at Gipsy Bridge Chapel, near Boston, six tubers of the famous Northern Star variety were sold by auction at the handsome sum of 13s. 4d. The weight of the six tubers being 14lb, the price works out at the extraordinary figure of over £995 per ton. The tubers were given by Mr. T. Kime.

NOTES & NOTICES

Edinburgh. Spring Show—Advance Prize Schedule.

We are in receipt of the advance prize schedule of the Royal Caledonian Horticultural Society's show, to be held on 25th and 26th of May, 1904. The secretary is Mr. P. Murray Thomson, 5, York Place, Edinburgh.

Appointments.

Mr. Geo. Burrows, for five years head gardener and bailiff to G. E. Belliss, Esq., The Dell, Kings Norton, as head gardener and land steward to Colonel Ralph Peacock, Avon Castle, Ringwood, Hants. * * Mr. John Stringer, gardener to the late Dr. W. C. Playfair, West Green Manor, Winchfield, as head gardener to Rowland Barran, Esq., M.P., Beechwood, Roundhay, near Leeds.

The Future of Thingwall Hall, Liverpool.

The Hall itself, with its ten acres of land, has been acquired by the Brothers of Charity, a Roman Catholic Brotherhood. The Park of 60 acres is in the hands of Mr. Rathbone, a well-known Liverpool architect, and in place of the ordinary streets it is his idea to preserve as far as possible every tree standing at present. But all the same it will be built on.

National Dahlia Society.

A meeting of the committee of the above society will be held by kind permission of the Horticultural Club, in the club room at the Hotel Windsor, Victoria Street, S.W., on Tuesday, October 27, at 2 p.m. Business: 1. To arrange schedule for 1904. 2. Other business. A meeting of the Official Catalogue Sub-Committee will be held at the conclusion of the above meeting.—P. W. TULLOCH, Hon. Secretary.

Royal Horticultural Society.

The next meeting of the Fruit, Floral, and Orchid Committees of the Royal Horticultural Society will be held on Tuesday, October 27, in the Drill Hall, Buckingham Gate, Westminster, 1—4 p.m. A paper on "Pruning Roses," by Mons. Vivian Morel, will be read at 3 o'clock. At a general meeting of the Royal Horticultural Society, held on Tuesday, October 13, sixty-five new Fellows were elected, making a total of 1,206 elected since the beginning of the present year.

R.H.S. Examinations in Horticulture, 1904.

The Society's annual examination in the principles and practice of horticulture will be held on Wednesday, April 20, 1904. A copy of the syllabus may be obtained by sending a stamped and directed envelope to the Sec. R.H.S., 117, Victoria Street, London, S.W. Intending candidates should send in their names not later than March 1. Copies of the questions set at the examinations 1893-1902 can be obtained at the R.H.S. office, price one shilling. * * As we intimated last week, the Society will also hold an examination in Cottage Gardening on Tuesday, June 21, 1904, for elementary school teachers. The general conduct of this examination will be on similar lines to that of the more general examination, save in obvious points on which they would not apply.

Obituary: Mr. J. M. Kitley.

We have to report the death of Mr. J. M. Kitley, The Vineries, Little Over, Derby, who died on Thursday last. Mr. Kitley, who has been in business for himself for the past few years, was considered one of the best Grape growers in the Midlands, his crops being always well worth seeing; and he took that keen interest in Grapes that many a young man would do well to follow. Starting his career under his father—who is at present managing the Orchard Co., Ltd., of Scotby, Carlisle—he made steady progress, and eventually took over The Vineries at Little Over, where he succeeded in establishing a name for himself as a most successful grower. He leaves a widow and two children to mourn the loss of a loving husband and father. His funeral took place at Warwick on Tuesday.

An Estate Changes Names.

We are informed that the estate lately named High Firs, at Harpenden, Herts, is now, and henceforth will be called Aldwickbury.

The Journal's Rose Analysis.

This important analysis of exhibition and garden Roses will be presented in our next issue, October 29. It will thus be in good time, especially in this late season, for intending planters to make selections by its guidance. As there is usually a great demand for the Rose edition, it would be advisable on the part of readers to make sure of a copy by timely notification to their newsagent. Mr. Mawley promises an audit of all the garden Roses introduced during the past few years. The number will also contain portraits of leading amateur rosarians.

County Technical Laboratories, Chelmsford.

The new buildings in King Edward's Avenue, just completed at a cost of nearly £12,000, comprise chemical, physical, and biological laboratories and classrooms, together with agricultural and horticultural museums and libraries, and provide facilities for systematic instruction in agriculture and horticulture, as well as in pure science. There is a large dairy for instruction in butter and cheese-making and the treatment of milk, and within three-quarters of a mile is the school garden, three acres in extent, and provided with potting shed and hothouses. The laboratories are intended to be a centre for agricultural and horticultural information for the whole county, and they include rooms for the analysis of soils, manures, foods, seeds, &c., and for other scientific work carried on in the interest of these industries. They will be opened by the Right Hon. the Earl of Onslow, G.C.M.G., President of the Board of Agriculture, on Friday afternoon, October 30, 1903, at half-past three o'clock. Cards of invitation can be obtained from the Secretary, County Education Offices, Chelmsford. The laboratories will be open for public inspection from two to five in the afternoon and seven to nine in the evening of the same day.

Festivities at Lowfield Nurseries.

On Saturday, October 3, Messrs. J. Cheal and Sons, of Lowfield Nurseries, Crawley, entertained all their employés, with their wives and families, in honour of the home-coming of Mr. Ernest Cheal with his bride, also as a welcome to Mr. and Mrs. Annett on their return from Ceylon, where they were married last March, Mrs. Annett being the eldest daughter and Mr. Ernest Cheal the eldest son of Mr. J. Cheal, the senior member of the firm. The firm had arranged for various sports in a meadow in the afternoon. The Temperance Band, composed almost entirely of the employés of the Nurseries, under the leadership of Mr. C. W. Chantler, the foreman, added much to the enjoyment of the afternoon. An adjournment was made at five o'clock to a large marquee, where over 200 sat down to a substantial tea. Mr. J. Cheal afterwards alluded to the occasion which had brought them together, and the family felt that they would like all the employés to share in the rejoicings over the double event, and it gave them much pleasure to meet together in this social manner. Mr. C. W. Chantler voiced the feelings of the employés in saying how interested they were in the events of the last few months, and how glad they were of this opportunity of wishing happiness and prosperity to the young people and continued success to the firm. Mr. Ernest Cheal also replied, saying that he and his wife were gratified to receive such a hearty welcome. Mr. Annett, too, responded. Mr. Alexander Cheal said that he should like to take this opportunity of thanking the staff and the employés for their assistance in building up and carrying on the business. He looked back over the thirty years of hard work and in the anxieties and responsibilities of conducting a business like this, it was everything to feel that they had at their backs the able and willing support of the employés. Mr. J. Cheal, later on, gave an interesting account of a recent visit to the United States and Canada, illustrated by a number of slides prepared from photos taken by himself. Mr. Annett followed with a selection of slides illustrative of Ceylon scenery and life, and the evening closed with a number of snapshots taken by Mr. Arthur Cheal during the work at the Nurseries and other home scenes, these latter exciting no little merriment among those present.—("East Grinstead Observer.")

Winter-garden Conservatories.

From the dark heavily-built, architectural plant structures of the later part of the eighteenth century, to the elegant, beautifully proportioned conservatories of the present day, surely a good step forward has been made. The old "orangeries" are here and there to be seen even now; but they are usually put to any convenient use, and generally they do not contain plants.

Six hundred and fifty years ago, Albertus Magnus constructed a conservatory, or structure, whereby he so prevented the escape of warmth from his plants, that he not only brought them to perfection earlier, but preserved them in beauty amid the severities of a German winter. For doing this, for effecting what everyone of our readers may now effect for a few pence, Albertus was in those dark ages designated a magician, and a leaguer with evil spirits. Happy for us, then, to live in better times, with wealth, enlightenment, and beauty all around.

And the huge "crystal palaces" erected for opulent owners of private gardens, or for public corporations, are such as could never have been guessed at even sixty years ago, when glass was still taxed, when coal was dear, and heating was largely by flues. Nor were there the plants to grow. The whole race of the Japanese and Chinese trees, shrubs, and plants, as well as numberless beauties from all the ends of the earth, have practically all been disseminated to the gardens of these islands during the past sixty or seventy years.

While the figures that we are enabled to show to-day represent patterns of the highest achievements in horticultural building, what say we to the news of hugely extensive glass erections that comes from the United States? The houses there are purely for commercial uses—the growth of plants for sale; and therefore elegance is not a merit; but the figures at all events seem impressive, and may be quoted verbatim as given in "The American Florist," as follows:—

"Plans have been practically consummated for the establishment at New York of the largest greenhouse in the world. The enterprise will be backed by a capital of \$600,000 [4s. 2d. is a

dollar] and it will require an outlay of nearly \$400,000 to get the buildings on a running basis. The parties at the head of the concern have a large establishment at Brampton, Canada. The Board of Trade announces that a contract has been made with the United States Flower Company of New York, having a capital stock of \$600,000, by which this company contracts to establish near this city a greenhouse plant with an area of 1,000,000 square feet of glass to cost about \$400,000 and not less than \$350,000; the whole plant to be completed as soon as possible after the ground is broken. The company agrees to employ not less than 300 male hands in its operations, with a pay roll not less than \$1,800 per week. This plant guarantees to operate for at least five years. The total cost of the site will be \$10,750 and must be raised within one month."

The erection of glass structures, unless they be frames, or minor shelters, is seldom attempted by gardeners, nor is it necessary. Still, some men delight in doing as much as they can, and those who have made a study of the subject may be naturally proud to practise their knowledge. Books on glass house erection seem wanting, and instruction is only occasionally to be had where a society pays a qualified lecturer to give a course of lectures, as was done at Edinburgh Botanic Garden some years ago.

On pages 360 and 361 of last week's issue, we were able, by the kindness of Messrs. Richardson and Co., of Darlington, who supplied the blocks, to illustrate the exterior views of two beautiful and commodious winter gardens erected by them. We now present the interior views of the same two houses, which readers may compare with the elevation plans. Such spacious, beautifully lighted houses are specially intended for the inclusion of tree-like growths—great Tree Ferns, Wattle-trees, or Mimosa, giant Araucarias, Fan Palms, Cordylines, Bamboos—and other similar subjects, as well as, of course, the numerous dwarf-growing ornamental conservatory plants. The subjects are usually planted out. Being spacious, there is also ample room for paths and seats. In public park conservatories small orchestras are at times accommodated, but this is rare. What the cost of such erections as those figured is, we do not know, but that might soon be got on enquiry. The winter garden seen on page 373 differs in style from the other two.



Richardson & Co.

Interior View of the Winter-Garden at Wolverhampton Public Park.



Richardson & Co.

Interior View of Winter-Garden at Moulton Paddocks.

Reminders About Bulbs for Beds.

Although there are hosts of other bright flowering plants employed for spring bedding, there can be no mistaking the fact that bulbs and tubers are each year more largely used for the same purpose. Their period of beauty, though of short duration, is often the time when gardens appear in their most brilliant dress of the season, and brightness we need everywhere. Let the rich have them in their thousands, and others in their hundreds or dozens, and each will find the investment a good one. Nothing, in my opinion, tends so much to promote the "strenuous" life as the pursuit of gardening.

Although we have so far escaped any very severe autumn frosts, the season has arrived when flower beds and borders will need a thorough overhauling to prepare them for the spring display, and it is also a time when flower beds may conveniently be given their annual dressing of manure. The materials employed for the purpose should to some extent be regulated by the plants to be grown in them. If bulbs are to be largely planted, it is not wise to add manure except in a thoroughly decayed state, as the tender, fleshy roots do not work freely in fresh manure, which often harbours hosts of minute yet troublesome grubs. Old hotbed manure in a sweet condition, with the addition of a little soot, answers well. When the soil is stiff, plenty of sweet leaf soil and burnt refuse form splendid material for bulb beds, and in many establishments these are always prepared in readiness for such occasions.

As the weather is often so changeable at this season, it is an excellent plan to clear a number of beds each morning, dig them roughly, and, after a few hours' exposure to air and sunshine, level and plant them: because if rains come during the night it is often several days before the soil is again in a sufficiently dry condition for planting. With a well worked soil, the dibble answers well for planting. A suitable depth for planting Tulips is from five to six inches; Daffodils slightly deeper; and smaller bulbs, such as Crocuses, from three to four inches. Shallow planting is not to be commended, as there is nothing like securing plenty of active roots before the tops push through the soil. Fortunately, during recent years there have been many striking departures from old methods of planting, and instead of invariably massing bulbs in beds, they are often with advantage associated with other plants.

In flower gardens of geometrical design, masses of distinct colours and prominent growths are exceedingly effective, but they are shown up to greater advantage when separated by less formally arranged beds, in which the colours and forms of the flowers used are skilfully arranged.

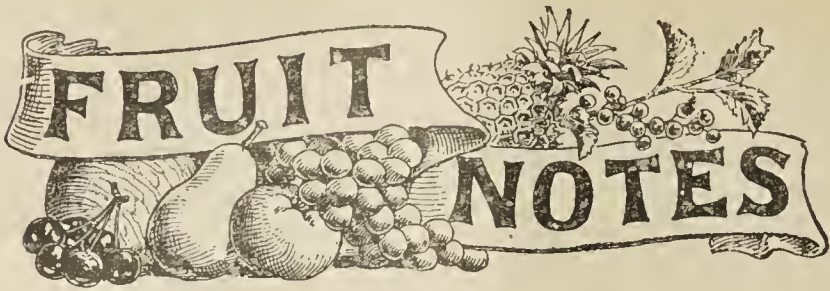
The charms of the many varieties of Crocuses cannot be overlooked, because they bring the first touch of real brightness in early spring. It is a pity, in some respects, that they are so early, because, although often recommended for edging beds with, their flowers fade before those of most other bulbous plants open. *Scilla siberica*, however, if planted at the same time, will generally begin to flower before the brightness of the Crocuses is over. And *Chionodoxa Lucilæ* follows the *Scilla* closely. These might therefore be associated in beds where dwarf plants are needed, or each be planted separately in small beds where a touch of early colouring is desirable.

Among Daffodils and Narcissi, the following are particularly good for planting in quantity, when high prices cannot be paid: *Van Sion*, *Princeps* (pale yellow), *Obvallaris* (early), *Golden Spur*, *Bulbocodium citrinum* (sulphur coloured), *Sir Watkin*, and *poeticus ornatus*. These, with *Orange Phoenix* and *poeticus*, give a late display.

Single Tulips form beautiful combinations if planted among Wallflowers or *Myosotis*. Yellow Wallflowers, planted a foot or more apart, according to the size of the plants, with *Tulipa chrysolora* between, makes a particularly bright bed; and yellow, white, or pink Tulips, represented by such fine varieties as *Canary Bird*, *Pottcbakker*, *L'Inmaculée*, or *Rose Gris de Lin*, planted a foot apart, with *Myosotis* as a groundwork, are combinations always admired. The *Scarlet Duc Van Thol* is a well-known dwarf early variety. *Cottage Maid* (white, edged rose) and *Couleur Ponceau* (beautifully feathered) are telling kinds to plant. Everybody should also plant a few bulbs of the peculiarly beautiful *Thos. Moore* (orange buff).

Violas form an excellent groundwork for Tulips of all descriptions, provided the latter are not planted closer than a foot apart. The double Tulips are particularly showy, and are excellent for massing. *Gloria Solis* (crimson, edged gold) is one of the best; *La Candeur* (white) and *Rex Rubrorum* (scarlet) flower simultaneously, and are good for associating in a mixed bed. The *Crimson Tournesol* (scarlet and yellow) is a massive flower of great beauty.

Hyacinths have the advantage of being delightfully scented as well as showy, but the price of the bulbs usually prevents them from being so largely planted as Tulips. The following varieties are particularly good: *Charles Dickens* (porcelain blue), *L'Innocence* (white), *King of the Blues* (dark blue), *Marie* (purplish blue), *Norma* (rose pink), and *Roi des Belges* (light scarlet). Those who have a fancy for a bed of many colours must not neglect the *St. Brigid Anemones*, for a bed of them in full beauty is one of the sights of the year, even in the finest gardens—something to engender enthusiasm by day and to inspire dreams at night!—H. D.



Apple, Golden Spire.

The fruiting propensities of Golden Spire are surely well borne out by the accompanying illustration. It is a really useful Apple, and, moreover, is of large size, and straw-coloured. It is in use, either as a cooking or dessert Apple, up to Christmas and later, being often employed by market men. Messrs. Bunyard thus describe it: "Medium, a tall, conical Apple, of taking straw-coloured appearance, of first quality; for market or home use; hangs firmly on the tree, and from its upright growth valuable for plantations. This sort is specially valuable, as it never fails to bear even in bad Apple seasons."

Our photograph came from Mr. Taylor, Halstead, Essex.

Notes on the Merits of Grapes.

Mrs. Pince, started early in March, sets its berries better than when started later, and the fruit ripens quite up to the shank, and when covered with its fine bloom is very taking in appearance. Alicante retains its colour well, and as a prelude to Gros Colman, is a very desirable Grape, and it is good in quality, the vinous flavour being very refreshing, and the earthiness, as in Gros Colman entirely absent, while its appearance is unrivalled by any oval Grape, except Alnwick Seedling, which is one of the best late Grapes.

The magnificence of Gros Colman renders it popular, as that goes a long way even with table Grapes, and is all-important for market. Its beautiful appearance whets the appetite, and the flavour is entirely overlooked. Beside West's St. Peter's, which is less presumptuous in bunch and berry, it is comparatively bad; yet when Gros Colman is started early, so as to allow it time to mature, the berries are not only superb, but the quality is greatly improved.

But its principal value consists in the easiness of its growth. The bunches are always compact, the berries set well, they swell to a good size, and when the Vines are not overcropped they colour well. It is far the best quality when grown on the old or new red sandstone formation, though it does well on alluvial soils, as do all the coarse vinous Grapes.

For rich vinous quality no thick-skinned Grape can vie with West's St. Peter's, but it is of no use where appearance at table is the chief merit in a Grape.

Lady Downe's Seedling is not only the best keeping Grape (we have had it excellent in June), but is unexcelled by any late Grape for uniform excellence in quality, though only about half as taking in appearance as Gros Colman, and not giving nearly so much weight of fruit per length or rod; it retains its richness to the last, simply because it contains more sugar, and mostly has a "smack" of Muscat.

In white Grapes there are some aspirants to fame, but none take a higher place than Trebbiano for appearance' sake, while being firm, crisp, and sweet.

There is Mrs. Pearson standing well out in white Grapes, and having quality, as well as other desirable properties; but, as a rule, the black Grapes hold the sway when neither Muscat of Alexandria or Canon Hall Muscat are in the race. There must not be any deficiency of moisture in the border, and the atmosphere not allowed to become stagnant, but have enough warmth with air to keep it in motion, the temperature not being allowed to fall much below 50deg until the leaves are off.—**EXPERT.**

Renovating Vine Borders.

Where the soil is of a suitable nature, and the cultural treatment proper, Vines flourish for an indefinite period; but they are mostly planted in artificial borders, and the roots confined to limited areas. These conditions result in the soil becoming defective in nutrition, and sometimes unfavourable as a rooting medium.

Thorough renovation in ordinary cases is desirable, but a partial removal of the soil, or such portion of it as will secure active feeders, is generally attended with satisfactory results. Where Vines, therefore, are not in a satisfactory condition, no time should be lost in removing the soil down to the roots and picking it from amongst them, so as to displace as much of the old stuff as possible with fresh compost, and it is best effected whilst the leaves are upon the stems, but not before they have performed their functions to the extent of perfecting the buds and wood.

In case the border is found very unsatisfactory, and the roots few and deep, it will be necessary to remove all the soil and renew the whole border, commencing with the drainage, which

should be clear, and 9in to 12in deep, with a 3in layer of fine material on the top, old mortar rubbish, freed of pieces of wood, answering perfectly. There must be a drain under the drainage to carry off superfluous water.

The soil should consist of the top 2in or 3in of a pasture, where the soil is a good yellow or hazel loam with a sixth of old mortar rubbish, one-twelfth of charred refuse or wood ashes, and one-hundredth of crushed quarter-inch Vines, all well incorporated. Two feet depth of compost is ample, allowing about 6in more for settling, and the roots should be laid in the top foot, and in layers, according to their inclination, encouraging those from near, and at, the collar, by bringing them just beneath the surface, making the whole compact, and having the soil moderately dry.

If the roots are inside and outside, one part may be done one year and another the next, without any danger of loss of crop. Take care to preserve all the roots practicable, merely cutting off broken, and paring bruised ends, smooth; and to keep them as much as possible from the drying influences of the atmosphere whilst the operation is in progress.

Afford a good watering to settle the soil about the roots, then sprinkle on each square yard 4oz of some approved fertiliser, mulch with an inch thickness of short sweetened manure, and cover outside borders with a few inches thickness of leaves with a little litter over them.—**G. A.**

Thoughts and Things About Vegetables.

Has a new dispensation begun for the culinary vegetable? The passing of the Chiswick Show, I believe, marks the beginning of an era of greater specialisation in the products of the kitchen garden, in the varied cultures of the same, and in dressing, preparing, and exhibiting. Numbers of vegetables are left neglected and uncultivated, even while the ever-recurring cry is for greater variety. While new fruits are gradually being added to the available selections, new vegetables are not to be found. I mean entirely new products, as, for instance, the Yam, if that were brought into use—and not merely fresh varieties of Cabbages, Turnips, Potatoes, and Onions, or any other existing types.

With the idea instilled that there are numerous products—as, for example, Corn Salad, Egg Plant, Indian Corn, the Morels and Truffles, Chinese Artichokes, Cardoons, Leaf Beet, Hambury Parsley, Orach, Liquorice—that could be more liberally and more generally attempted, the department of vegetable culture will no longer be neglected to anything like the extent it has been almost till the present. And the late Vegetable Conference—the second within our ken—should have shown how useful, and necessary we should say, it would be to have an annual show of culinary produce on a large and representative scale. If joined with the yearly fruit exhibition, well and good; but, in any case, the vegetables ought to receive due consideration, that classes be prepared for all comers, and space sufficient to do exhibitors full justice.

But these notes were not intended at the opening to run along this course. I would write of "thoughts and things"—parcels of information—gleaned from Mr. A. Ireland, manager on Dobbie and Co.'s seed farm at Orpington, in Kent. It has been the writer's privilege to visit Orpington at the seed harvesting season for some years past, and though this year's journey was made late, there is still a great deal to be seen and noted on a flower and vegetable seed ground. But this was the last of these Orpington visits, for Messrs. Dobbie and Co. are removing at once to their newly-purchased land not far from Colchester, in Essex. This ground extends to some 60 acres, the tilth being of grand quality, and the village near it is Mark's Tey. In the spring, possibly, and certainly next autumn, there will be much to interest the horticulturist. By-the-bye, the firm's showing powers will be taxed for next season at least, owing to the produce having all to come from Rothesay, in Scotland; but things will be bridged over by 1905.

Giving the vegetables the place of honour, what has to be said will be as briefly put as possible. Turning to the Red Cabbages for a start, Messrs. Dobbie are able to show a small-headed variety, named the Small Blood-red, a neat, firm Cabbage, which is a selection from the Large Red. Its advantage is that it is dwarf, and many more plants can be planted on a given piece of ground than could the Large Red. It is curious to notice that Red Cabbages can never be grown on the same seed farm with any other variety of the species without fear of almost certain interpollination; and while the Reds affect the ordinary Cabbages, the latter never can show their influence on the Reds to any extent.

Some attention has been drawn to Dobbie's Large Red Shallots, through their having been taken exception to at a Kent show, the judges stating them to be Russian Onions. This has authoritatively been proved incorrect; they are a large form of Shallot,

though over-sized for market purposes, and are a type sought after in the North by gardeners and cottagers whose soil is unsuitable for the successful growth of true Onions, such as Ailsa Craig, Golden Globe, or Cranston's Excelsior. And, while Onions are the theme, let me say that Golden Globe has yielded a goodly crop of well matured, dry seeds this year, and the growths had been very robust. One ton of bulbs were planted last year for seed production, which shows what a demand there is for it.

Not very many Tomatoes were a success in the open air this year; but in Champion, growers must surely find a meritorious sort. Both indoors and out, at Orpington, the plants have well repaid their space. Nine nice rounded fruits per truss, and the fruits evenly coloured all over, with firm, relishable flesh, are points ordinarily to be noted in Champion; and out of doors the plants were three feet high, clothed all their length with leaves and fruit, and as they were planted from 7-inch pots at the end of May, bearing then their first cluster of fruits, they had a good chance to make the best of the season. They are planted in rows 2ft apart in the open seed ground, but a little shelter was given at first by placing Bean and Pea stakes around the outer fringe of the area. The seeds from this Tomato are now being obtained. The process adopted is to squeeze the fruits through a half-inch sieve, the pulp falling into a tub. Here it

The new purple Beet, too, furnishes a fine product, the roots being of medium size, smooth, tapering evenly, with a dark blood-red skin and flesh. Most growers will agree that the darker the flesh the better is the Beet liked, and in that point this selection is perfect. Parsley, too, must be had, but how often we are content with the coarser kinds. Without fear of any contradiction, I may say that the Rothesay firm's Selected Parsley is the finest (in a double sense) on the market, and no further commentary is necessary when I state that its culture, for seed, runs into acres.

These observations on vegetable crops may conclude here, and the flowers will have their turn at another time; but I must bear testimony to the extreme care on the manager's part in selecting only the finest samples of the firm's stock for seed purposes, and his unwearying cultural application, from sowing to harvesting.—WANDERING WILLIE.

Begonia, Gloire de Sceaux.

Presented in perfect form and flower, there is scarcely another Begonia that possesses such noble characteristics as this French-raised variety; even the now familiar Gloire de Lorraine pales before its noble grandeur. There is, however, scarcely a com-



Apple, Golden Spire.

remains for twenty-four hours, which seems to make the washing easier, and washing is the next step. The pulp being placed in portions into a fine sieve, it is then washed through, the soft material, of course, being carried away, while the seeds remain. They are then dried and looked over, preparatory to selling.

A good frame Melon is often sought for, and nothing yet beats Monro's Little Heath, and the Cantaloup, both of which produce splendid dessert fruits, the latter, of course, much the larger.

The Golden Ball Turnip was much admired in Dobbie's stand at Chiswick, and though yellow fleshed Turnips are not in favour southwards, the northerners have no such aversion, and no less than 40 bushels were sent this year to Rothesay. The firm has a new early Turnip now under trial, this being a cross between Early Milan and Model White. Earliness and depth of flesh are the two points desired.

Turning to culinary Peas, there are three that might be remarked, being the Gladstone, which is undeservedly overlooked at times; Alderman, and Glory of Devon. The latter has been far more liable to the Pea weevil this year, and to mildew, than either of the others at Orpington. Then there is Dobbie's Champion Scarlet Runner, that obtained an award of merit this year at Chiswick against others. It is a heavy cropper, the pods being long and succulent and weighty. Some exhibitors grow it, I believe, on poles twelve feet long, placed diagonally against each other; but at the seed grounds here the plants had been pinched at three feet in height.

petition between these two kinds, because the one is an early winter variety, the other has its season late in spring. It would seem that Gloire de Sceaux, like many other plants, has what may not be inaptly termed "fads," for in some gardens the culture of a plant will be regarded as the essence of simplicity, while in another the same issues are reduced to quite a science.

Remembering the many attempts one has seen and can recall where failure predominates rather than success, it was not a little refreshing to come upon a fine batch of luxuriant specimens quite recently in one of the warm stoves in the Leighton Gardens, Westbury, over which Mr. George Bound so ably presides. They are reproduced annually from cuttings, as old plants are neither safe nor satisfactory. They are rooted in the month of May, and by periodical shifts attain to large proportions in 6-inch and 7-inch pots. At the present time, while still active in growth, they stand some three feet from the ground line, and some of the strongest have a diameter in leaf growth of about the same proportions. What they seem to delight in is plenty of moist heat, without resort to syringing, and, at the same time, shade from bright sun. They do not make the needful progress when stinted of fire heat, nor do they revel in exposure to sunshine; but even with these items studiously remembered and acted upon, this Begonia baffles the efforts of some gardeners to create a satisfactory display in spring. In Mr. Bound's collection it was plainly indicated what influence fresh soil and periodic repottings had upon the growth and development. For the warm conservatory, when Lorraines have spent themselves in spring, Gloire de Sceaux replaces them excellently.—W. S.



Spiræa Thunbergi.

The short notice (page 327) of this, one of the most elegant of all the shrubby *Spiræas*, served to remind me of an old favourite amongst this not too highly appreciated class of plants. The illustration upon another page of the same number scarcely does the plant justice. Where the plant succeeds, its long arching growths of delicate greenery are very beautiful, especially in spring, and make excellent material for associating with many blossoms. The small white flowers are pretty and very freely produced. It is true the plant likes a rather warm and sheltered position, but it is a pity to see it, as one sometimes does crammed into shrubberies with scarcely room to breathe, so to say. Given room for development a well-grown bush is a charming object and worthy a position in any garden.—COUNTRYMAN.

The Colouring of Apples.

In answer to "Lamasool," (page 359) I have observed during many seasons that Apples very much increase in colour after the first "snap" of cold, and rarely, I think, attain good colour without it.—W. R. RAILLEM.

An interesting theme is that put forward by "Lamasool" (page 359). The problem, however, seems to me one that needs the science scholar to deal with satisfactorily, for without scientific knowledge and training it could not be readily said what are the influences of wind, rain, and cold nights bearing on this matter of Apple colour. If wind and rain account for the higher trend of colour in Apples, surely the passing year has been one that should have given of that quality in abundance; but some will be heard to say, fruit is absent this year, and thus no food for experimental thought exists. There are Apples in some places, even in this barren year, and at the late Chiswick Show one ought easily to find an answer to such query. Personally, I did not come away so much impressed with the Apple colours, save those grown under glass; these certainly had colour so highly developed that it almost appeared overdone; and why this in glass-grown fruit, when outside so little excess was apparent? I quite believe that rain in the autumn tends to the development of colour in late Apples, but that the theory of wind and cold nights being a still greater power, extends somewhat beyond my grasp.

The few pertinent questions asked by "Lamasool" give rise to a few more, at least to the thinking reader, and probably the more one thinks, the greater depths of unintelligible vein extend beyond his sphere, except, of course, as before said, to the scientifically trained scholar. When the mind rests on sharp, cold nights for a moment as being a factor in developing colour, one is made to reflect on the warm nights of August, and compare their issues, and also that of rain and wind with the Apples that ripen and are gathered in that month, notably Beauty of Bath, Red Astrachan, Devonshire Quarrenden, &c., and the somewhat later Williams' Favourite, Gravenstein, or Lady Sudley. In these are to be seen as good colour as in that of later autumn and winter fruits, and the same may be said of Pears.

Then, too, a change of root environment is sometimes made to accelerate fruit colour. By root-pruning I have instances this year of a change of colour which almost places the fruit beyond recognition compared with former memories; yet no change happens in the form of the tree or its treatment other than its roots; but the same influences from wind, sun, and rain are present, not more or less than heretofore. In the growth of pot trees neither rain nor cold winds can have any far reaching influences, yet the colour developed in their fruits is such that the merest novice can distinguish between them and the outdoor grown specimens. There is scarcely any ground for argument in dispensing with sun, rather than wind and rain, so far as it affects colour in Apples. A crowded tree will soon give a foretaste of what would happen without the influence of sun acting upon the fruit. This would also prevent the action of rain and wind.

Though rebutting evidence may be brought forward tending to diminish one, or enhance the influence of another, of the several factors, one must even then voluntarily recognise that each play their separate part tending towards this natural development, not only in Apples, but other fruits as well. A wall-trained tree affords an example. Here there is a higher and more delicately toned complexion in the fruit, yet they are subject to the same influences, rain, wind, and sun, variously modified, the same as the open-air tree. There is, and must be, so to speak, a confusion of theories when the several factors are

analysed and comparisons made dealing with the circumstances as they concern the tree, the variety, the weather, or the cultivation. I incline to the opinion that the chemical constitution of the soil has the most marked influence on colour.—W. S.

[If "W. S." refers to the pot-trees as shown by Bunyard for example, we would say that these are finished in the open-air, and not under glass.—Ed.]

In reply to the inquiry made by "Lamasool," it is, if I mistake not, during the last year or two that I contributed a reference to this subject in connection with certain effects on the growth of Peas, to which I will recur presently, as I attribute both results to the same cause; but will first refer to Apples. Several of the great shows at the Crystal Palace of the Royal Horticultural Society of autumn fruit have been successively described as rather "green," and wanting in colour on the average, in comparison to other years. We had a fair opportunity for observation in the course of the series of dry years from 1893 to 1901, when the excess of sunshine should, according to popular thought, have resulted in a colour picture of Apples shown; but which were precisely the seasons declared "green." It is thus I have what I think recognised the probably true cause of differentiation. It is well known that the sun's heat is requisite for the highest nitrification of the soil, so that this development occurs most effectively in the months of July and August; but as nitrates primarily foster vegetal growth, it is the size of Apples which is thereby affected, other features, such as quality, flavour, and colouring, depending on other factors.

When relatively heavy rains fall about August, their effect is to cool the ground; nitrification is checked, and growth of fruit suspended, and energy diverted to the promotion of the other features referred to. Indeed, this is proved in relation to colouring by copious watering and syringing of Apple trees about August in droughty seasons, which latter, if continuing through September, would produce generally a "green" crop. The effect of water on colouring is best attained at the period of about six weeks to a month before picking, be it natural or artificial.

As to results on Peas, I have repeatedly read about a want of effect of farmyard manure on crops gathered after the earlier ones, say well into July and later, whereas earlier crops show the distinct difference between well-manured and unmanured crops of that vegetable. The cause is that the natural nitrification of the soil in July and August overlaps the effects of dung, which is, therefore, relatively useless on later crops, and could with advantage be replaced by watering.—H. H. RASCHEN, Sidcup, Kent, October 19, 1903.

Rose, The Meteor.

In the Journal of last week it is stated that this Rose is not described in the last (tenth) edition of "The Rose Garden." If the writer of that notice, wherein he so faithfully describes it, will turn to page 332 of the tenth edition, he will find it described and commended under the letter "T."—The Meteor. I know of no failings, and should speak of it in ordinary conversation as a beautiful Rose. Although not one of my seedlings, it was first sent out by my firm some years ago. It was raised by the late Mr. Henry Bennett, and sold in the first instance to a grower in America.—WM. PAUL, Paul's Royal Nurseries, Waltham Cross.

Potato, Northern Star.

I learn that 420lb of tubers of the above came from 2lb of seed. (This is a bona-fide crop, by the way, grown at Liphook, Hants.) This, however, is nothing very startling, compared with the crop of 1,301lb got from 1lb of seed of Empire State Potato in 1885, in America; nor does it equal the thirteen bushels grown in England by a gardener of Lord Londes many years ago, and shown in London. Like many others, Mr. Yates (page 337) asks what is the source of Northern Star's origin. We are not told. We learn how hybrid Orchids are raised, but the humble Potato—we have to be satisfied to get it. An eminent foreign Potato raiser has stated now all his seedlings were obtained in order to show buyers what sort of "blood" is in them. Under the dumb system we get a new thing, that whilst in its early youth appears vigorous, yet after a few trials suddenly collapses or loses its original qualities. Even Northern Star is not entirely fixed. Mr. Yates expects the millennium when he waits for a disease-proof Potato. Northern Star certainly stands longer than any, although one Kentish grower states that his were diseased as quickly as other sorts. As for cropping powers by ordinary backyard culture, I know one grower who grew Northern Star, yet his crop in no way equalled Sir J. Llewelyn.

To get nearer home, however, Northern Star alongside many others in my plot was a disgrace at lifting time. I absolutely refuse to state how many I lifted, but it was bad; nay, worse than my worst. That is to say, worse than any hill of any variety that had haulm. Respecting Evergood, I may tell Mr. Yates that it has been out several years, for it sells at 16s. per cwt., and he may take it from me that Evergood is almost as long standing as Northern Star, with about ten times the cropping capacity on

my sticky soil. In Lincolnshire it lifted 18 tons per acre, with an average of 3lb of diseased tubers per ton. As for King Edward VII., which was sent out this year, I know for a fact it has lifted at 18½ tons per acre under field culture in Lines, and last year it was over 20 tons per acre, with little disease. King Edward VII. out-yielded Northern Star in about the same fashion as the moon does the light of Jupiter, although my soil is not suited to growing large tubers. Moreover, King Edward VII. is a second-early, and the most beautiful coloured Kidney variety ever sent out; whilst Evergood is one of the most taking white Rounds to-day. Northern Star as a showman's "tater" is of little use, and the cottagers who paid 10s. per pound (and I believe there are some) probably have found that their old sorts, of no market value, are still necessary to win prizes. In a word, Northern Star is the most disappointing variety I have grown this year. Perhaps if I had coddled it under a frame and planted out on a specially prepared warm bed I should have lifted a hundredweight or two; but I did not, and that is the end of the tale.—T. A. WESTON, Porthing, Hythe, Kent.

Orchid or Violet Day?

Following last week's note on page 352, Mr. Chamberlain should, I think, have a flower day, to be instituted on similar lines to the Primrose Day; but I would like to suggest Violets in place of Orchids, because I think Orchids are only for the few; whereas Violets may be obtained by all classes, that is, if the Violet is popular with Mr. Chamberlain. If not that one, possibly there may be another hardy flower that could be named for the purpose by making enquiries. There are so many sorts and classes of Orchids that I fail to see how it could be successful.—A. J. LONG.

A Hint for the R.H.S.

Mr. W. Bateson, F.R.S., is reported to have asked "whether some new and great beneficial departure could not be made when the new Wisley Garden is taken over? May the taking over of Wisley," he asked, "not be used for the determination of the hybridisation experiments that are now so paramount?" Well, that is great work; it is necessary work; and it is a work we should, I think, all vote for, to be undertaken.

Leaving that, however, might I suggest that the Royal Horticultural Society begin the formation now, of a collection of models of Apple and Pear fruits (these more particularly), to be placed in cases round the walls of the new hall being built at Westminster?

The Orchid Committee are wise in their day and generation, for they made a rule long ago that every striking new Orchid that obtains a certificate shall be painted, and they carry this rule very fully into effect. Is it not time that the Fruit Committee should possess a collection of 100 or 150 types of Apples and Pears modelled in wax or other substance? London is a great centre; and in the interests of students of pomology I think such a collection ought to exist. Printed cards containing a few particulars of the varieties, and possibly a woodcut block, to show the character of the tree (where such is distinctive), would be needed to accompany the models.—METROPOLITAN FELLOW.

Autumnal Strawberries.

As one of the members of the Ipswich Gardeners' Society who had the pleasure of inspecting the Strawberries at Sproughton Rectory, permit me to cordially endorse the remarks of "J. H. D." on page 350. I had intended sending some notes to the Journal on the subject had not the genial Rector informed us that a representative of the staff had visited him a short time previously. It was a miserable, wet afternoon on the occasion of our visit, so that there was but a small muster of members; however, those who had braved the elements expressed themselves as amply repaid by the sight that met their gaze.

Mr. Foster-Melliar, with his usual courtesy, gave us all the information in his power about his method of cultivation. "Go inside and taste them," said the Rector; "I doubt the flavour won't be very grand after this wet weather," observed one individual on the quiet. He was the last to leave the bed, so had probably changed his opinion. The variety St. Joseph impressed the visitors most; it is an enormous cropper, possesses an agreeable flavour, while a great point in its favour is the relatively small foliage, so that the trusses of fruit elevated on the wire supports are fully exposed to the sun, and at the same time kept away from the damp soil, an absolutely essential condition with these Strawberries. St. Antoine de Padoue produces larger fruit than St. Joseph, but is not such a free cropper. The foliage is also much too vigorous, notwithstanding the drastic treatment resorted to by Mr. Melliar to destroy the fungoid attack. In his concluding observations "J. H. D." thinks it improbable that their culture will be taken up by the market men; nevertheless, I know of one local grower who has disposed of several pecks this season at a remunerative price.—E. G. CREEK, Westerfield House Gardens.



Notes on Roses.

No time should be lost in pruning all climbing varieties, other than autumn flowering sorts like Aimee Vibert or Dorothy Perkins for example. The method of pruning climbing Roses is very different to that required by H.P.'s or Teas. In the latter case, close pruning gives the best results, the best blooms coming from the growth of the current year. Not so in sorts like Crimson Rambler, Aglaia, and The Lyon. True, these flower from spikelets, so to speak, but the foundation shoots from which these spring are the result of growth the preceding year. In Roses of this section, maturity of growth has much to do with their future success. How shall we obtain maturity, or in other words, ripened wood? Not by allowing all the summer-made growth to become thickly entangled, quite excluding light and air, and remain so until what is known as the general Rose pruning time, April. Directly the flowering season is past pruning should commence.

Why leave these superfluous growths until the spring, when they can be as well cut away now? The material we require to give a full crop of handsome flowers is strong, vigorous shoots growing from the base, and fully 10ft long, or more. If these are exposed thoroughly to air, sunlight, and wind, maturity is effected as growth progresses; and when flowering time once more comes round, very different will be the result as compared with those treated the reverse.

Cut away all shoots that have given a full crop of bloom, except in some instances where added growth is being made, even if it be not direct from the base. Weakly shoots should come out also; such are of little aid. When all are pruned away that is thought to be necessary, tie those remaining to the supports, whatever they may be, spreading them out as thinly as space will admit. If by any means, owing to position, the soil about the roots is not moist, give it a thorough soaking to enable the plants to perform their proper functions of bud formation in the embryo stage; and bear in mind that this section of Roses is quite on an equal with fruit trees, viz., that the foundation of next year's fruit promise is laid this year.

MAKING NEW ROSE BEDS.

When new Rose beds are to be made this autumn, no time should be lost in making preparation so that early planting can be done. Roses planted in October are much more likely to succeed than those put in the ground in January, or even December. Roses are not like fruit trees; the latter do not, as a rule, make new roots immediately, but Roses *do*, when planted at the time suggested; therefore it is an advantage to plant early. So much of the future success of Roses depends upon the method of preparation and the manipulation of the soil, that all means to ensure success should be adopted.

Deep trenching of the soil is an important factor in Rose growing, especially where the subsoil is of a heavy, retentive character. Roses enjoy copious supplies of moisture at the roots during the period when growth is being made; but they cannot resist stagnation about their roots, during the winter and spring months especially. In the case of heavy soil, trench it fully 2ft deep, breaking up the bottom another 6in; this latter admits of a quick percolation of water from heavy rains. For ease in the after stirring, the surface soil in trenching should be retained in the same position as before—on the top. While trenching is in progress, add half-rotted stable manure freely, also decayed vegetable refuse, wood ashes and road grit, all of which tends to bring the soil into a more workable condition, rendering the rooting space for the Roses more congenial, and imparting vigour to the growth also.

Where light, sandy soil has to be dealt with, Rose growing is not always so successful as in the case of the opposite kind of soil. Trenching need not be so deep; but a quantity of manure must be added—this from the cow sheds if possible—as also a quantity of clay, incorporated with the sand. A 3in covering of decayed vegetable refuse, wood ashes, and road grit spread over the surface of heavy soil after trenching, will assist the planting considerably. If trenching is done at once the soil has time to settle down a little before planting time.—HAMPSHIRE DOWNS.

PHILADELPHIA RAMBLER ROSE.—The new Rose, Philadelphia Rambler, is well thought of as an improvement on the original Crimson Rambler.

SELECTION OF ROSES.—"Herefordshire Incumbent" desires to add the following varieties to his list, given on page 349:—H.B. Madame Isaac Pereire (cannot be too highly recommended); H.B. Souvenir de Malmaison (just half century old, but always young).

Another Bothy Plan.

GROUND PLAN.—All the ground floor is covered with alternate black and red tiles, 6in by 6in, laid in cement. The walls of the room inside are of glazed brick. For a height of five feet they are of a light green colour, and above that, white. A sitting room and a dwelling room are provided, and, for greater seclusion, a reading room also.

To support the partitions dividing the bedroom to the left of the upstairs plan, a strong iron girder spans the width of the building, and three smaller ones join it at the points indicated. This is done in preference to having stud-work, which is, of course, less desirable than bricks. There are six bedrooms and a bathroom. The walls of the latter are faced inside with glazed bricks, but the bedroom walls are plastered and coated over with a light green colouring. There is a fireplace in each room.

The exterior walls, and also the central one supporting the chimneys, are one and a half brick thick. The quoins are of granite, or, if this is not obtainable at a reasonable price, Bath stone. The other walls (with the exception of those resting on the girders) are nine inches thick, while those over the girders are four and a half inches. Views of the front and east end elevation are given. The estimated cost is about £275, exclusive of labour.—WM. ROWLES, Under-Gardener, Irwell Bank, Eccles, Lancashire.

ITEMS OF EXPENDITURE.

	£	s.	d.
1 Common red bricks, 69,225	102	0	0
2 Glazed (white and green) bricks, 5,525	12	0	0
3 Stone, 132 blocks	49	1	0
4 Tiles, flooring, 3,270	8	16	0
5 Roofing slates, 1,400	28	0	0
6 Beams	12	15	0
7 Rafters, 1	11	5	0
8 Other roofing timber	5	0	0
9 Flooring boards	4	16	0
10 Lathes	3	5	0
11 Plaster	16	10	0
12 Girder (iron), 50ft. in all	6	5	0
13 Windows, including glass	10	2	0
14 Doors	3	18	0
Total	273	13	0

Societies.

R.H.S. Scientific Committee, Oct. 13th.

Present: Dr. M. T. Masters F.R.S. (in the chair); Messrs. Saunders, Worsdell, Massee, Gordon, and Holmes; Drs. Rendle and Cooke; Revs. W. Wilks and G. Henslow, Hon. Sec.

Chrysanthemum leaves, spotted.—Mr. Saunders exhibited leaves apparently encrusted with some mineral. Mr. Holmes undertook to examine it.

Male Figs.—Dr. Masters observed that he had several instances of Figs sent to him that failed to ripen. They were remarkable for containing entirely male flowers; ordinary Figs being entirely female, but ripening without fertilisation, except in the case of the Smyrna Figs, which require "caprification."

Potato disease.—Dr. Cooke replied to enquiries as the transmission of the mycelium from the leaves down the stem being the only means of reaching the tuber. His opinion was that the disease may be communicated direct to the tubers while young and with a delicate skin, or when bruised or wounded.

Clematis parasite.—He also reported on a new disease, which Mr. Chittenden named *Ovularia clematidis*, and exhibited at the last meeting. Dr. Cooke supplied a technical description of the fungus, and adds: "No experiments have been made to check this parasite. If it should establish itself, it would be well to try powdered sulphur at first, and if this be not successful to use Bordeaux mixture."

Vegetable monstrosities.—Mr. Worsdell exhibited a spray of *Pelargonium* with foliaceous bracts at the base of the umbel, and a fasciated peduncle; also flower heads of *Scabiosa purpurea* with proliferous axis. Mr. Wilks observed that this is particularly common on German plants.

Lilac injured by insects.—Mr. Gordon showed branches attacked by some insect, on which Mr. Saunders has reported as follows: "The Lilac leaves were injured by the caterpillars of a small moth, one of the *Tineina*; but nearer than that I cannot say. The caterpillars had taken their departure from the leaves, and had no doubt buried themselves in the ground beneath the bush and become chrysalides within a couple of inches of the surface. I should recommend that a good dressing of kainit should be given, and that it should be chopped in with a hoe; this would probably kill a number of them. When the leaves are opening in the spring another dressing would be useful to prevent the moths making their way to the surface."

Potatoes diseased.—Mr. Gordon also exhibited Potatoes badly attacked by *Chrysophyetis endobiotica*. This fungus was introduced from the Continent, and first appeared in Cheshire. It has completely destroyed crops in allotments this year in Nottinghamshire.

Wound parasite of Apple trees.—Dr. Cooke also reported upon some examples brought by Mr. Chittenden. The fungus is *Hydnum*

Schiedermayeri. It formed a strip of about 4ft growing through the bark. This fungus is said to be very destructive to Apple trees, the spores entering through a wound in the bark.

Tomentum on Vine leaves.—Dr. Bonavia sent leaves to show how closely natural woolliness, or tomentum, resembled the red spider's web, and that it was impossible to distinguish them by the naked eye. Mr. Saunders observes: "I should not think it could be possible for anyone to distinguish between the tomentum on the leaves and the web spun by the red spiders with the naked eye, unless the webs only covered parts of the leaves, in which case the under sides of the leaves would have a patchy appearance; but the similarity between the web and the tomentum is so great, that otherwise no ordinary eye could detect the difference. Under the microscope the threads of the tomentum are twisted, and do not lie so straight as the threads of the webs."

The Horticultural Club.

ARCTIC NATURAL HISTORY.

The lecture by Mr. Charles E. Pearson, on "Bird-nesting in Russian Lapland," before the Horticultural Club, on October 13, was extremely interesting, and photographs were shown of eggs of many kinds and views of the scenery within the Arctic circle, plus a number of native plants and flowers. Mr. Pearson began by apologising for choosing a subject somewhat out of the horticultural line, but in point of fact, apart from the intensely interesting pictures of eggs and nests, there were such charming examples of Arctic flowers and Arctic landscapes that an apology was utterly needless, especially in view of the lecturer's treatment of his subject, at once humorous and instructive. Clutches of eggs of a great number of birds were shown exactly as they were found, the photographs being taken from above, thus affording a full view; and it was really marvellous to note in many cases how the seemingly capricious blotchings and markings of the eggs masked them from prying eyes, owing to their consequent close imitation of their surroundings. In some cases, too, it was difficult to dispel the idea that the birds had not also selected a site amid rounded pebbles of similar outline and colour to the eggs, in order to aid this masking, so exactly did they resemble each other. Eggs and nests—the latter in many cases being practically non-existent, the eggs lying among bare stones—were shown of the buzzard, redwing, eagle, gulls, eider duck, wild swan, oyster-catcher, dotterel, and many others, each being accompanied by a vivid description of the habits of the birds and the various adventures which attended the discovery of the carefully hidden eggs.

Hours of motionless waiting, accompanied by myriads of industrious mosquitoes working their sweet will on every exposed portion of skin, were sometimes needed ere the disturbed mother bird would settle down on the otherwise undiscoverable nest. Long leagues of difficult travel over several feet of treacherous snow preluded many of the discoveries; and in this latter connection a most laughable description was given of the difficulty of bargaining with a rapacious jehu by the mediation first of an interpreter who translated the English into Norwegian, then another who did the Norsk into Finnish, and finally a Finn who knew some Russian—no little speculation resulting as to the form in which the original remarks reached their destination.

Some of the photographs gave a clear idea of the marvellous rapidity of Arctic vegetation during the brief summer. A dense and robust mass of *Caltha palustris* (the Marsh Marigold) was, for instance, shown in full flower on a spot which, three weeks previously, was deep in snow, and only fifteen days before had been observed as just evidencing growth. Barley is stated to be ripe within thirteen weeks of sowing. This the lecturer imputed to the long and continuous daylight, and a relative photograph showed the midnight sun fairly high in the sky. Some lovely specimens of *Myosotis alpestris*, *Silene acaulis*, Bog Cotton, and other flowering plants evidenced also the beauty of the Arctic flora, as well as its rapidity of development.—C. T. D.

Sheffield Floral and Horticultural.

(Interesting Report of Annual Meeting.)

The annual general meeting of this society was particularly well attended, and much interest was evinced in the business. The Secretary's report dealt with some very important matters. Recently the society had approached other district societies with the view of bringing about an amalgamation of the whole, so that one first-class exhibition should be held, but the small local societies cling tenaciously to "restricted areas." The honour (?) of carrying on a show, and of being "on the committee," probably weighs, but the Sheffield Society has one paramount object—that of securing the advance of horticulture, and there is an absence of personal considerations. Every effort is to be made to make the next show one of the leading exhibitions of the year. The Duke of Norfolk has become President; Mr. W. Lewendon, F.R.H.S. (93, Neill Road, Sheffield) was unanimously re-elected Secretary; and Mr. A. Watson, Chairman of Committee, which includes such men as Messrs. J. Artindale, J. Bennett, T. Swain, J. Marsden, B. Bray, &c. The 1904 show will be held on Saturday, August 13, in the beautiful grounds of Holly Court, by

kind permission of F. A. Kelly, Esq., and special classes will be arranged to attract some of the leading exhibitors. The next meeting of the society, on November 4, will be particularly attractive, Mr. T. Snowden being scheduled to give "Impressions of the Horticultural Traders' Trip to Holland and Belgium in April, 1903." The Secretary would be glad to hear from any friend who would like to be present.

Reading Gardeners' Association.

The fortnightly meeting was held on the 12th inst., and, notwithstanding the exceedingly rough weather experienced, between seventy and eighty members assembled, under the chairmanship of the President, Mr. Leonard Sutton, to hear a lecture by Mr. G. Wythes, V.M.H., of Syon House Gardens, Brentford, on "Strawberries and Their Culture." As the lecturer was well known to the majority present as an authority with regard to the Strawberry, and also as a large grower, much was expected by the members, and it was a source of gratification to all that the expectations formed were more than realised. The subject was not only treated exhaustively, but in a plain and practical manner. The points touched upon were, the preparing of plants for forcing, varieties for forcing, the routine of culture, Strawberries in the open ground, prolonging the season, culture after planting out, Alpine or small kinds, and last, but which proved the most interesting, Strawberries as annuals or yearlings.

Great stress was laid upon the fact that it was most desirable that plants should be grown purposely for runners and not allowed to fruit. As to varieties for forcing, Royal Sovereign was recom-

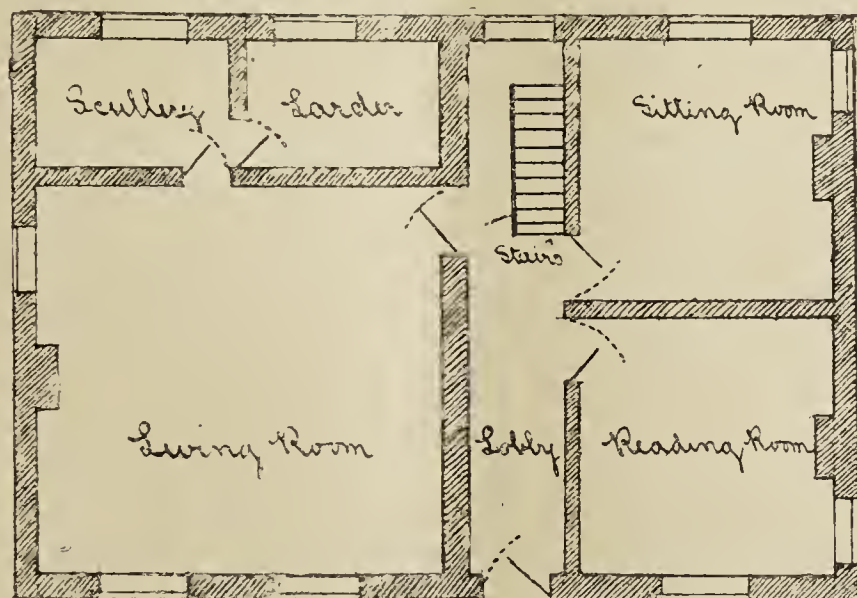
mended for early supplies, to be followed by Vicomtesse Hericart de Thury, La Grosse Sucrée, and President for late use; while for the "annual" system of culture Royal Sovereign, President, Dr. Hogg, and Gunton Park were advised.

The discussion which followed brought out several points of interest. Those taking part were the President, Messrs. Fry, Powell, Judd, Exler, Hinton, Turnham, Townsend, Gibson, and Tunbridge. For the reason stated above, the exhibits were smaller and less numerous than usual, but the certificate of cultural merit was awarded to four especially fine fruits of Sutton's Royal Jubilee Melon, staged by Mr. G. Herridge, The Gardens, St. Peter's Hill, Caversham. Mr. Durrant, The Gardens, Preston, exhibited a plant of Regina with yellow flowers. A hearty vote of thanks was accorded to Mr. Wythes and the exhibitors. Seven new members were elected.

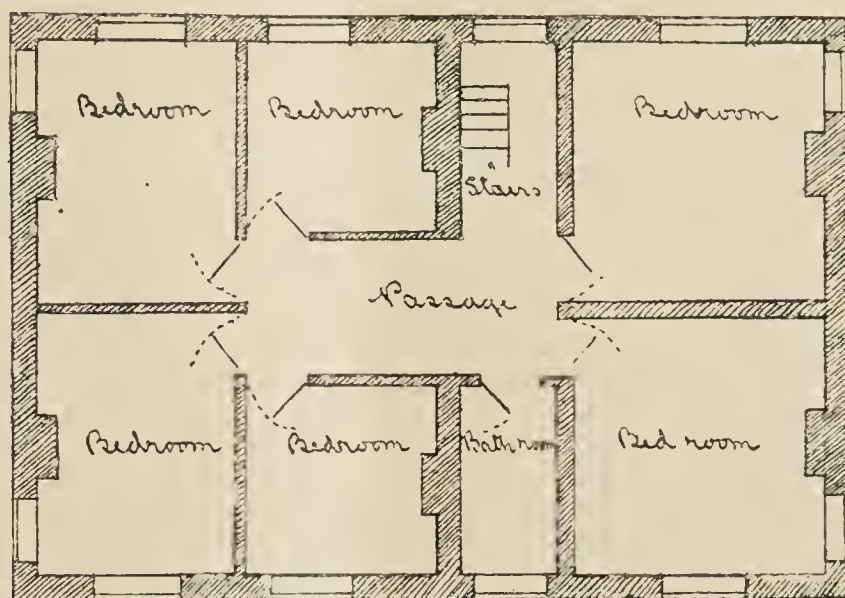
Bristol Gardeners'.

The opening meeting of the winter session was held at St. John's Rooms, Redland, on Thursday evening. The chair was taken by Dr. Barclay J. Barron, and a most instructive lecture was given by Mr. J. C. House, of Coombe Nurseries, Westbury-on-Trym, his subject being "Hardy Perennials." A special feature of the evening was a magnificent collection of fifty kinds of perennial flowers grown by Messrs. Isaac House and Sons. Pyrethrums, Pentstemons, Michaelmas Daisies, alike were beautiful, showing the amount of care and attention bestowed upon them. The society unanimously awarded them a certificate of special merit for this display. Dr. Barron, on passing a vote of

1. Ground Plan



2. Upstar Plan

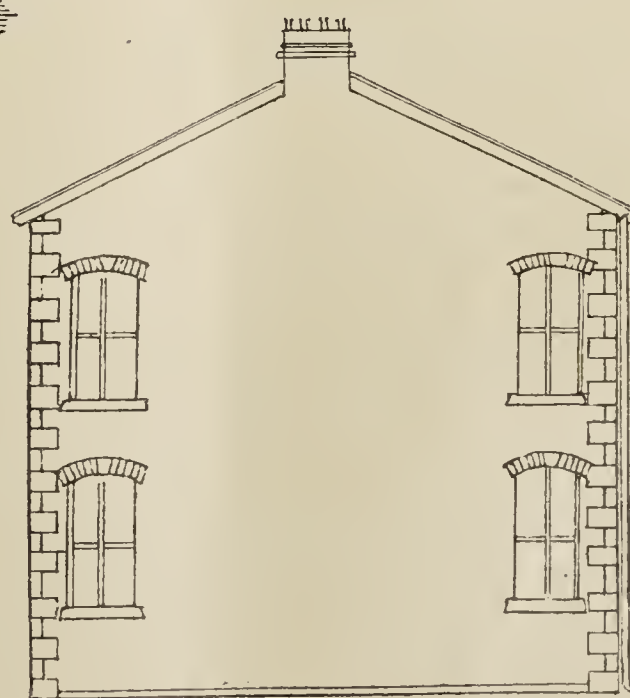


Scale 1 inch equals 12 feet

3. Front Elevation



4. E. Side Elevation



A Two-storeyed Bothy. The fourth and last of the Journal Plans.

thanks, hoped the society would continue to maintain the steady progress it had made since its formation, and expressed the hope that more of the Clifton gentry would interest themselves in the good, sound, and useful work being done. Prizes for six bunches of perennials were awarded to Mr. A. Baker (gardener, Mr. Orchard); Lady Cave (gardener, Mr. Poole); and Mr. J. C. Aitken (gardener, Mr. Clarke). For a basket of autumn foliage and berries, the prizes went to Mr. R. Ambrose, Mr. Cary, and Mr. R. Poole. Certificates of merit went to Mr. A. Cole (gardener, Mr. Bird); for six vases Begonias, Mr. H. Daniel (gardener, Mr. Quick); for one Orchid, and for two Orchids, to Mr. F. C. Fisher (gardener, Mr. Shelton).

Liverpool Grain, Root, and Fruit Show.

In the Potato classes everything of note was staged in the perfection for which Lancashire and Cheshire growers are noted. The following list of winning varieties should prove valuable in such a season as this.

White Early Kidney, first, Mr. B. Ashton, Lathom House, Ormskirk, with Sir J. Llewelyn. Sutton's Early Regent, first, Mr. F. Grey, Halsall. White Early Round, Mr. G. Ashley, with beautiful Sutton's A1.

White Second-early Kidney, Mr. John Eccles, with Crocus. White Second-early Round, first, Mr. E. Davies, Partington, with Windsor Castle.

Early, or Second, any other shape, Mr. Jno. Niven, with World's Fair, Snowdrop, or Lord of the Isles; Mrs. Johnson with Snowdrop.

The classes for Reading Giants, Sutton's Abundance, and Sutton's Satisfaction were splendidly contested. Class 21 was for Up-to-Date, General Roberts, or Scottish Triumph, the former variety easily asserting itself. Maincrop or Langworthy: first, Mr. B. Ashton, with the former, in grand condition.

Late Kidney: Mr. J. Parker, with Bank of England. Late Round: Mr. E. Davies, with Industry. Late any other shape: Mr. D. Oldfield, with The Crofter, in superb form.

Coloured Early or Second Round: Mr. E. Alty, Aughton, with Reading Russets. Peerless Rose was the winner in the Kidney class; whilst for late coloured Kidney and round, Messrs. T. Reason and J. H. Carter scored with extra Edgecote Purple and Adirondach. The six heaviest tubers were Reading Giants, weighing 15lbs 4ozs, from Mr. J. Needham.

New varieties, any colour: Early Second or any other shape Kidney, Mr. B. Ashton gained first and special, with a grand dish of Webb's New Guardian. In the corresponding class for Rounds Mr. J. Johnson led with Lord Curzon. Late or any shape Kidney: Mr. G. Ashley, with Cramond Blossom. Late Round: M. J. Needham, with a fine sample of Evergood.

Messrs. Sutton's Specials: Best three dishes selected from their varieties, first, Mr. T. Reason, with Abundance, Satisfaction, and Favourite; second, Mr. J. Johnson, with Abundance, Satisfaction, and Ideal. Best dish: first, Mr. E. Davies, with a faultless dish of Satisfaction. Sutton's Reliance: first, Mr. J. Johnson.

Messrs. E. Webb's Specials: Dish of Early or Second-early Kidney: First, Mr. B. Ashton, with handsome (Webb's) Wordsley Pride. For early Rounds, first, Mr. J. Johnson, with Renown (Webb). Late Kidney: First, Mr. J. Parker, with Webb's Motor. Late Round: First and special, Mr. J. Haycox, with Webb's Goldfinder, one of the best dishes in the show.

TRADE EXHIBITS.—Messrs. Dicksons, Limited, were forward, with a particularly fine table of fifty dishes of Potatoes, with capital specimens of Pioneer (late Kidney, extra fine), New Century, Royal Standard, Diamond Jubilee, The Dickson (a good looking midseason Kidney), Evergood, and the famous Northern Star. Messrs. Webb and Sons had Wheat and Barley.

Metropolitan Public Gardens Association.

OPEN SPACES.—At the monthly meeting of the Metropolitan Public Gardens Association, held at 83, Lancaster Gate, W., it was stated that a legacy of £100 had been paid to the association under the will of the late Miss Rachel Duncombe. It was agreed, in view of its detrimental effect upon public spaces, to urge the Paddington Borough Council to appeal to the House of Lords against the recent judgment of the Court of Appeal in reference to St. Mary's Recreation Ground, whereby it was decided that a public body holding public spaces has not the same rights as a private owner has of putting up screens for the purpose of compelling adjacent owners to set back their buildings to a reasonable distance from the boundaries of the public space, instead of building right up thereto, as has been done in Paddington.

It was stated that the London School Board were taking steps to acquire the well-known Wycliffe Chapel and burial ground in Stepney for the purpose of erecting schools thereon, and it was agreed to oppose the proposal, as being contrary to the Disused Burial Ground and Open Spaces Acts. A letter was read from the London County Council agreeing to promote a Bill next Session for enabling Metropolitan Borough Councils to plant and maintain trees in thoroughfares.

It was announced that the laying out of Southfields Recreation Ground, Wandsworth, had been completed, and that the ground had been opened to the public, under the name of Coronation Gardens. It was stated in regard to the scheme for the extension of Hampstead Heath that the voluntary contributions now amounted to about £10,000. A further letter was read from the London County Council declining to contribute to the acquisition of St. Peter's Square, Hammersmith, a fine enclosure 1½ acre in extent, which is in danger of being built over, owing to the high price, £12,500, asked. It was considered that every effort ought to be made to prevent the obliteration of London Squares, and that the Council should be asked at what a price it would be prepared to assist.

The secretary stated that he had given evidence at a Local Government Board inquiry in favour of the preservation as a public space of the Norfolk Square area, situated in a very congested part of Islington, and that seats had been sent to grounds in Tottenham, Hanwell, and Dulwich, and to Turnham Green, as previously agreed; but that the association's seats had been removed by the Office of Works from Trafalgar Square, in reference to which Lord Meath was in communication with Lord Windsor. Proposals for securing West Square, Lambeth, an estate at Upper Clapton, churchyards in Newgate Street and Poplar, and for the preservation of the enclosure opposite St. Thomas' Hospital were under consideration.

Newport (Mon.) Gardeners'.

The first paper of the session was read by Mr. J. Basham, jun., of Bassaleg, on October 14, the subject being "Hardy Fruit, Past and Present." Mr. Basham said where Oak, Ash, and Elm thrive, fruit trees will thrive also. He dealt with varieties grown 300 and 400 years ago, quoting largely from a work by Austin, printed 1629, some of the varieties being still in cultivation, such as the Cats-head Apple. The Old English Pearmain could be traced back to the twelfth century. Some names of varieties grown in the olden times were very amusing, such as Tender Chesnut Rattle, Cushion Hell, Our Ladies, Dewy St. John (of two sorts), Mother in Law, &c. The directions for the culture of fruit trees given in the old books would do very well for the present time. Messrs. Daniels, Bishop, Woodward, Wiggins, Bale and others took part in the discussion. Mr. Basham was accorded a very hearty vote of thanks for his able and interesting paper. The society's certificate of merit was awarded to Mr. J. Basham, and also to Mr. E. Basham for their splendid displays of Apples and Pears. Mr. J. Duff presided over a good attendance.—J. PEGLER, Hon. Sec.

Ipswich Mutual Improvement.

At the last meeting of the above society, on October 15, a lantern lecture on "The Evolution of a Flower" was given by Mr. A. Martinelli, on the lines of the synopsis published with some appreciative comments on page 359 of your previous issue. Mr. R. C. Notcutt presided over a good attendance. For nearly an hour an interested audience followed the lecturer while he traced the development of the various types of plants found in successive geological strata, and their prototypes of the present day. Especially interesting were the slides showing the prevailing character of the vegetation during the carboniferous period; the fossil forest of Cycads, in the Jurassic system; likewise the tropical vegetation of the Tertiary (Cocene) period. The society is fortunate in numbering amongst its members gentlemen having such scientific qualifications as Mr. Martinelli, especially as they are always ready to impart their knowledge for the benefit of their fellow members. At the close of the lecture a vote of thanks was proposed by Mr. Shipston, seconded by Mr. Messenger, and carried unanimously.—E. C.

THE GARDEN CITY ASSOCIATION IN THE HIGHLANDS.—An excellent opportunity now presents itself in Scotland by which the character of a Highland village might be preserved in the plans for the housing of some 300 workers in the employment of the British Aluminium Company at Foyers, Inverness-shire. This company is willing, subject to certain reasonable reservations, to give control of the buildings and development to a syndicate having these interests in view, and willing to accept a limited return of, say, 4 per cent. or 5 per cent. on its capital. Architects are invited to compete in designing plans of such dwellings, and all who are interested in preserving the beauty of the Highland scenery are asked to co-operate in this practical scheme. The Garden City Association has been approached as being an influential body interested in providing suitable and healthful dwellings for the people, and that organisation is prepared to consider and advise as to the mode of carrying out any scheme which may be decided upon, whereby, with the co-operation of the company, a village worthy of its exceptional surroundings may be established. The Garden City Association has also consented to receive any communications as under:—The Garden City Association, 347-351, Birkbeck Bank Chambers, Holborn, London, W.C.



Fruit Forcing.

CUCUMBERS.—The autumn fruiters being in full bearing, must not be overcropped, but the plants will bear enormously if well supplied with nourishment. Examine the plants at least once a week for the removal of bad leaves and for stopping and cutting away the superfluous growths. Sweetened horse-droppings, sprinkled on the beds occasionally, act as a gentle excitant to the roots, supplying nourishment to the soil and ammonia to the atmosphere. Spare no effort to keep the foliage clean and healthy, and do not permit accumulations of dirt on the glass. Allow the winter fruiters to extend well up the trellis before stopping them; train the shoots right and left at about one foot distance apart. Earth the roots as they protrude from the hillocks or ridges; supply water as required, not less in temperature than that of the bed, being careful not to overwater or allow the plants to lack needful supplies of that element and liquid manure, or surface dressings of fertilisers washed in. Maintain a night temperature of 65deg to 70deg in mild weather, 60deg to 65deg when the nights are cold, 70deg to 75deg by day, artificially advancing to 80deg, 85deg, or 90deg with sun heat. Admit a little air at the top of the house whenever the weather is favourable, but avoid cold currents—indeed, it must be done without lowering the temperature or drying the air too much; and lose no opportunity of closing early in the afternoon on days when a little ventilation has been given in the early part of the day. On dull days little moisture will be required.

PEACHES AND NECTARINES: EARLY FORCED TREES.—Whether the varieties comprise Hale's Early, Stirling Castle, Royal George, Dymond, Grosse Mignonne, Goshawk, Bellegarde, and similar second early and midseason Peaches, along with Lord Napier, Stanwick Elruge, Elruge, Improved Downton, Dryden, Darwin, and other second early and midseason Nectarines, or consist of Alexander, Waterloo, Duchess of Cornwall, Amsden's June, and other very early Peaches, with Cardinal and Early Rivers Nectarines, the trees will have been at rest for some time, and having been pruned, dressed, and everything put into proper order, but little beyond keeping cool will be required until starting time.

SUCCESSION HOUSES.—The trees will be in various stages of maturing the foliage, according to the time of starting, but this must not be hurried by removing the leaves forcibly. If ripening tardily, admit air freely at night, keeping the house rather close in the early part of the day and maintaining a dry atmosphere. Seek gradual maturation, when the leaves will part freely from the trees.—ST. ALBANS.

Kitchen Garden.

POTATOES.—Circumstances difficult of control may have prevented the lifting of the Potato crop in its entirety, but every opportunity should be taken during dry periods to lift the tubers out of the ground. If an unfavourable time is anticipated for drying them it will be best at this late period to spread the tubers out under cover, taking them there as soon as picked up. In order to economise space, select the best tubers out at once. A further selection will divide the tubers reserved for use from those suitable for seed. The former, immediately they are dry enough, may be stored in a dry, cool place where they are safe from frost and can be kept covered from the light. Conveniences differ, some storing them in heaps on the floor, while others will pack them in barrels or sacks. Where large quantities are grown, and the tubers can be fairly well dried, they may be clamped outdoors, covering the heap with a good layer of straw, and on this a liberal thickness of soil.

SEED POTATOES are readily dealt with. Place them in layers in shallow boxes, which may be stored on shelves in any structure, cool, but safe from frost. When handling the tubers look out for diseased ones.

BEET.—In lifting Beet the roots must be carefully handled, so as not to break the tap roots more than necessary. The leaves should be twisted off several inches from the crown. Cutting them will cause bleeding. Lay them out to dry for a day or two, and then store them in a cool shed between layers of dry ashes.

TURNIPS.—The autumn-sown crop should be thinned to the extent the plants require for forming good roots. Roots still developing may remain in the ground for winter use, to be pulled as required, but those fully grown may with advantage be lifted and stored under straw in a cool shed where they are handy to obtain in bad weather.

CHICORY.—This being a valuable salad plant, well-grown roots may be lifted as required. Cut off the tops just above the

crown, and pack them in pots or boxes, with soil between, and place the receptacles in a cellar where absolute darkness can be ensured. In three weeks growth will commence, and this may be used for salading.

CELERY AND CELERIAC.—The last earthings may be given to Celery plants constituting the late supply. Bring the ridge of soil well to a point, so as to throw off rain readily. A portion of the crop of Celeriac should be lifted and stored in sand. Remove the leaves except the central ones.

CARROTS AND PARSNIPS.—Fully-grown roots of Carrots may be lifted and stored. The leaves may be cut off close to the crowns. Dry ashes will preserve the roots well. For the sake of having roots conveniently at hand in unsuitable weather, a portion of the Parsnip crop may be lifted and stored in the same manner as Carrots. The bulk of the roots, however, are best left in the ground until wanted.

OUTDOOR TOMATOES.—Green fruits still hanging on the plants cannot by any possibility ripen, so they ought to be gathered and made into jam or pickled. Any with a tinge of colour in them, cut with a portion of stem, will colour further in a warm structure.

CABBAGES.—Cabbage plants may still be inserted, especially any that can be lifted with small balls of soil and roots from the seed beds. Dust soot or lime about the plants which are growing, to ward off the slugs, which may be abundant in damp weather. To further assist them, remove yellow leaves and keep the soil clear of weeds by hoeing. The latter operation is only practicable and advisable when the weather has dried the surface soil. When in a pasty condition, trampling upon the ground closes the pores of the soil and excludes air.—EAST KENT.

Trade Notes.

Henry West, Bristol.

Mr. H. West, late head gardener at Bettisfield Park, Whitchurch, Salop, has gone into business as a nurseryman, seedsman, and florist, on his own account, at Cheltenham Road Nurseries, Stokes Croft, Bristol.

Change of Address.

We are informed that "Chase's Beetle Poison," of recent years forwarded by Thomas Chase, of 151, Broad Street, Birmingham, having upon the death of Mrs. Chase, sen., been purchased by A. Chase, will now be supplied wholesale from 3, High View Terrace, West Norwood, London, S.E.

Vaporite.

This is a new vapour process developed by Mr. G. F. Strawson. Vaporite gradually evolves a noxious vapour, which fills the interstices of soil, from which the insects cannot escape and are consequently destroyed. This (we are informed) is applicable to every kind of plant, grown under all conditions, whether in the field, the garden, or under glass. For field crops generally the application of 150lb to 200lb per statute acre should be sown broadcast and ploughed in and allowed to remain undisturbed. It is sold in bags by Strawsons, City Bank Buildings, 71a, Queen Victoria Street, London, E.C.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
October.										
Sunday ...11	S.S.E.	deg. 51.9	deg. 51.0	deg. 59.2	deg. 42.8	Ins. 0.98	deg. 54.7	deg. 57.0	deg. 57.4	deg. 38.0
Monday ...12	S.S.W.	58.2	57.0	62.9	51.3	0.34	55.0	56.2	57.1	48.5
Tuesday ...13	S.W.	51.7	48.3	60.4	50.0	—	55.3	56.2	57.0	42.5
Wed'sday 14	S.W.	55.9	53.0	59.2	48.0	0.32	54.5	56.2	57.0	38.2
Thursday 15	W.S.W.	51.7	48.3	56.6	51.3	—	55.2	56.0	56.8	49.5
Friday ...16	S.W.	49.0	45.0	56.5	43.5	0.02	53.8	55.9	56.6	34.2
Saturday 17	W.N.W.	50.5	47.2	55.3	47.0	—	53.0	55.5	56.4	39.8
MEANS ...		52.7	50.0	58.6	47.7	Total. 1.66	54.5	56.1	56.9	41.5

The weather has been dull, and a considerable quantity of rain has fallen during the week.

THE BEE-KEEPER.

Wintering.

The year 1903 is now closed, as far as the honey harvest is concerned. Would it not be well for us to consider what were the causes of failure or success of the year's working? Let us go back to the end of the honey harvest of 1902. Many of us, I fear, failed to do our duty, and trusted to good fortune favouring us in the spring of the present year—and what were the results? The weather was unfavourable and the stores ran out, and, most unfortunate of all, many of our best stocks died of starvation. Yet the fault was our own; we ought to have fed up the colonies well before September was out. Let us profit, then, at this late hour by our misfortunes of last season, and make such a catastrophe an impossibility.

Examine every stock, and if the bees cover six combs densely and each comb has an average of $4\frac{1}{2}$ to 5lbs. of honey stored and sealed, we may rest contented; but if not, then we supply the deficiency by feeding with a good cake of candy. Next see that the hives are quite waterproof, for if the winter follow the example of the summer—and there is every sign of it—we shall have a very wet time of it. I know of nothing that is more hurtful to a colony of bees than dampness. The best remedy against leaky roofs is to cover with tin. A cheap method of doing this is to use tins, such as large cocoa tins, tack them as slaters do slates, and solder up the edges, and give them two coats of paint. With regard to the inside, place the candy over the centre frames, cover well with quilts, and leave the entrances only wide enough for one bee to pass through. Close up the dummy and pack the sides well with chaff.

HOW TO MAKE CANDY.—Remember, if each colony has from 25lbs to 30lbs of sealed stores, there is no need to feed with candy, for they will have quite sufficient to carry them over to May. Use a tin saucepan, and place in it 8lbs of the best granulated or white lump sugar and pour on it a pint of boiling water. Stir well, but do not allow the pan to touch the fire or you are almost sure to burn it—and burnt sugar is death to bees in the winter. When you have boiled it sufficiently—and a few minutes is usually sufficient—take it from the fire and stir well until it cools, and it will then be of a flaky nature.—HYBLA.

Young Gardeners' Domain.

Apprenticeship of a German Gardener.

First of all it is required of an aspirant to have a fair school education; if possible, language (Latin especially) and geography, which help him considerably, and save a lot of study in after days. If the young man has found a place to enter as an apprentice, the majority of establishments charge a certain sum per annum, Germany generally from 100 to 150 marks (84s. to 156s.); France and Belgium about the same. Then he must enter a contract to serve a time, generally three years. In rare cases he will be allowed a small compensation at the last year of his time.

There are some places which take apprentices without pay, but then he must generally serve a time of four years.

This time will never be forgotten by any young man who passed through it. It is a time of hard work, and not only long days of hard work—in many places it is compulsory to pass through evening school to collect knowledge in landscape drawing, geometry, and surveying. This goes through to sometimes three years during winter. Then besides at home it is not only practical work which occupies the young man, but also theoretical. There are the names of all the plants to be learned, their nature, native country, under what conditions they grow best, what soil is best for them; books have to be bought and studied; many employers require their apprentices to keep a daybook in which all work done during the day has to be entered. Not only superficial, but to the minutest details. After twenty-six years the writer recalls many instances of apparent negligence and the rather strong reprimands he received. In this way the time passes for the apprentice under constant work with few and long between pleasures. After the expiration of his time he is called an assistant, and receives his certificate, of which every young gardener is as proud as any young girl of a new Easter hat.

Then his time comes to travel. Of every young gardener it is expected that he sees other establishments, if possible other countries, and widen his knowledge. We all, who passed through the mill, know how proud we felt and thought we knew it all; but no matter how hard we worked and studied, after getting to a new place he finds out how little he really does know. Wherever he goes there are different methods, other plants,

always something new; so it keeps him hustling to keep up to date. It is a constant learning as long as he is in the profession. But this is a gardener.—R. W. UNGER (in "Union Gardener.")

The Editor acknowledges the receipt of some interesting letters, following his invitation given last week, and promises the publication of those that are noteworthy.



* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.

INSURANCE AGAINST LOSS AT SHOWS (W. L.).—We presume you mean insurance against a wet day, or similar detractor. Try "Lloyd's."

BOOKS (W. H.).—Messrs. W. and H. Collingridge publish an Encyclopædia of Gardening. The price we do not know, but you could drop a postcard to Aldersgate Street, E.C., and enquire.



The Comma Butterfly.

THE COMMA BUTTERFLY (Naturalist).

—We are quite unable to say whether this species of *Grapta* is found in numbers in Kent or Surrey. At one time it was quite absent from these counties, though prevalent in Worcester and Hereford, as well as elsewhere in the Midlands. It flies in October, and the caterpillars feed on the Hop a little before the time that the Hops are gathered. The butterfly, or imago, is very distinct in form.

DEFINITION OF HARDY HERBACEOUS CUT FLOWERS (W. T.).—The three Lilies you name—*Lilium speciosum album*, *L. s. rosea*, and *L. Harrisii*—are strictly herbaceous bulbous plants, as also are *Gladioli*. There is no reason why they should not be included in a collection of herbaceous cut flowers at local, or indeed any shows, except where separate classes are provided for such plants—say for Liliums and for Gladioli—separately in the schedules, and these so worded as to exclude their being shown as "cut" herbaceous plants. Indeed, herbaceous implies any plant not of a ligneous nature, whether bulbous, tuberous, or other kind of rootstock, evergreen or deciduous. Of course, when classes are provided in the schedules for particular plants or flowers, it is usual to disqualify such in collections of cut herbaceous, though this is not stated in the schedules, and often causes much needless bickering.

REMOVING PLUM TREE (A. Boyle).—You cannot adopt a better plan than the one you propose. In all probability the trees will have some roots approaching more or less a vertical position, and they must be severed, half of them this year and the other half the next. If you can place a quantity of light, gritty vegetable soil in the trench, packing it very firmly round the roots, it will be of great value in promoting the emission of a number of short fibrous roots that are so desirable for the quick re-establishment of the tree. It will be an advantage rather than otherwise to prune the tree by shortening the luxuriant branches.

NAMES OF FRUITS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (J. P.).—Pear Doyenné du Comice; Apple Mannington Pearmain. (F. N.).—1, Allington; 2, Ecklinville; 3, Bismarck; 4, Ribston Pippin. (North Berwick).—1, Wealthy; 2, Gascoigne's Scarlet; 3, Margil; 4, Tower of Glammis. (Fanny Tait).—Grapes (1) Trebbiano and (2) Alicante.

NAMES OF PLANTS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (T. L.).—1, *Aster horizontalis*; 2, *A. cordifolius*; 3, we do not name Dahlias. (F. T.).—1, *Polygonum molle*; 2, *P. orientale*; 3, *Dendrobium formosum giganteum*; 4, *Odontoglossum grande*; 5, *Cattleya Mantini*. (Orchidist).—1, *Lælio-Cattleya* × *Nysa*; 2, *Cattleya Wendlandiana*; 3, *Lycaste Skinneri alba*; 4, *C. Gaskelliana alba*; 5, *Tricopilia nobilis*.

COMMUNICATIONS RECEIVED.—C. J., W. R., F. W. C., H. F. M., J. S. U., C. H. P., R. & Co., Horticultural College, Swanley, A. F. M., F. P. R., H. S., H. D., L. S. W., J. V. & S., W. L., E. M., E. B., F. T., A. I., N. F. A., N. F. F., J. B., L. O. T.

Weather Notes.

The Continued Wet.

It is now October 19 and very little of the Corn crop is secured in this locality. For the last ten days rain has been general, and if a promising interval now and then insinuated itself, a recurrence of the prevailing conditions has summarily put a closure upon the rising hopes of stealing a few sheaves from the demon of the rainstorm. The state of matters at this moment is serious, and aged people say that the like has not taken place within the range of memory. The harvests of 1868, 1872, and 1879 were in a measure unpropitious; but in neither case was the persistency of the rain so great as in the present year. The wet nature of the harvest of 1872, personally, I shall never forget. That year is specially memorable to myself as being the one which rightly or wrongly destined me to become a sharer of the fortunes of a gardener, and as my first contact with "the noble art" was to assist in the drudgery of the culinary supply of a large establishment, I got all the rain that was going. My clothes, between fire drying and wet were, figuratively speaking, rotted on my back.

So much for my opinion of the year of my entry on graduation. The crops were very much destroyed with the wet, and late before being secured. The year 1879 was very much of a piece with the present one—uniformly of a low temperature (that is in the latitude of Edinburgh) where my observations were made. It is worthy of note to bear in mind that this year was immediately succeeded by the longest and severest winter on record, beginning on November 11, and breaking up on March 22, 1880. Doubtless the cold nature of the earth's temperature had much to do in bringing this phenomenon about.—D. C., Hamilton, N. B.

Trade Catalogues Received.

Blackmore and Langdon, Twerton Hill Nursery, Bath.—*Carnations, Picotees, &c.*
Amos Perry, Hardy Plant Farm, Winchmore Hill, London, N.—*Supplement to Parts 1 and 2 of Hardy Border and Rock Plants.*
C. Sprenger, Naples, Vomero, Italy.—*List of Plants.*
Charles Turner, The Royal Nurseries, Slough.—*Roses.*

Covent Garden Market.—October 21st.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, Canadian Baldwins, per brl.	18	0 to 20	0	Grapes, Alicante, lb.	0 10 to 1 3
" Greenings, "	20	0	24	" Colman	0 10
" Nova Scotia				" Hamburg	1 0
Gravensteins				Pears, Comice, ½-case	12 0
per brl.	18	0	20	" Winter Seckle	12 0
" Ribstons, brl.	24	0	27	Pines, St. Michael's	3 0
Bananas	9	0	14	Plums, Californian,	
Figs, Italian, 12's, 15's,				Black, 4 bkts.,	
per doz.	1 6	1 9		per case	10 0
" 24's	2 6	3 0		" Golden Drops, 4	
Lemons, Messina, case	10	0	15	bkts., per case	14 0
Nuts, Cob, per lb.	0 5½	0 6		" Silver Prunes, 4	
Oranges, case	12	0	15	bkts., per case	11 0

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 6	to 3 6	Horseradish, bunch	1 9	to 2 0
" Jerusalem, sieve	1 6	0 0	Leeks, bunch	0 2	0 2½
Batavia, doz.	2 0	0 0	Lettuce, Cabbage, doz.	0 6	0 0
Beet, red, doz.	0 6	0 0	Mushrooms	0 8	0 9
Brussels Sprouts, ½-sieve	2 0	2 6	Mustard & Cress, doz.		
Cabbages, Spring, tally	2 0	0 0	punnets	1 6	0 0
Carrots, bunch	0 2	0 0	Onions, bushel	3 0	0 0
Cauliflowers, doz.	1 0	0 0	Parsley, doz. bnchs.	2 0	0 0
Celery, per bun. of 8	0 9	1 0	Potatoes, cwt.	4 0	5 0
Corn Salad, strike	1 0	1 3	Radishes, doz.	0 9	1 0
Cos Lettuce, doz.	1 0	0 0	Scarlet Runners, bush.	2 0	3 6
Cucumbers doz.	3 0	4 0	Spinach, bush.	2 0	0 0
Endive, doz.	1 6	0 0	Tomatoes, English, lb.	0 3	0 4½
Herbs, bunch	0 2	0 0	Turnips, bnch.	0 0	0 2

Average Wholesale Prices.—Plants in Pots

Most of the undermentioned plants are sold in 48 and 32-sized pots

	s. d.	s. d.		s. d.	s. d.
Aralias, doz. (48's) ...	6 0	to 8 0	Ficus elastica, doz. ...	10 0	to 15 0
Araucaria, doz. ...	21 0	24 0	Foliage plants, var, each	1 0	5 0
Aspidistra, doz. ...	24 0	36 0	Grevilleas, 48's, doz. ...	5 0	0 0
Chrysanthemums, lifted	6 0	9 0	Lycopodiums, doz. ...	3 0	0 0
„ disbudded specimens	1 0	2 6	Marguerite Daisy, doz.	8 0	9 0
Crotons, doz. ...	18 0	30 0	Myrtles, doz. ...	6 0	9 6
Cyperus alternifolius			Palms, in var., doz. ...	15 0	30 0
doz. ...	4 0	5 0	„ specimens	21 0	63 0
Dracæna, var., doz. ...	18 0	21 0	Pandanus Veitchi, 48's,		
„ viridis, doz. ...	8 0	12 0	doz. ...	36 0	48 0
Ferns, var., doz. ...	4 0	18 0	Shrubs, in pots	4 0	6 0
„ small, 100 ...	10 0	16 0	Solanums	8 0	10 0

Average Wholesale Prices.—Cut Flowers.

	s.	d.	s.	d.		s.	d.	s.	d.
Arums, doz.	4	0	to	5	0	Marguerites, white,			
Asparagus, Fern, bnch.	1	0		2	0	doz. bnchs.	1	0	to 2 0
Carnations, 12 blooms	1	0		1	6	,, yellow, doz. bnchs.	1	0	0 0
Cattleyas, doz.	10	0		12	0	Myrtle, English, bunch	0	6	0 0
Croton foliage, bun. ...	0	9		1	0	Odontoglossums	4	0	0 0
Cycas leaves, each ...	0	9		1	6	Orange blossom, bunch	2	0	0 0
Eucharis, doz.	1	6		0	0	Roses, Niphetos, white,			
Gardenias, doz.	1	6		2	0	doz.	1	0	1 6
Geranium, scarlet, doz.						,, pink, doz.	1	0	2 0
bnchs.	3	0		4	0	,, yellow, doz. (Perles)	1	6	2 0
Ivy leaves, doz. bun. ...	1	6		0	0	,, Liberty, doz.	2	0	0 0
Lilium Harrisii	3	0		3	6	,, Generals	1	0	1 6
Maidenhair Fern, doz.						Smilax, bunch	2	6	3 0
bnchs.	4	0		0	6	Stephanotis, doz. ...	3	0	4 0
Lily of Valley, 12 bnchs	9	0		15	0	Tuberoses, gross	3	0	0 0



These Autumn Days.

The autumn days are very well filled with work of one sort or another. The difficulty is not to find a job, but to get all jobs through that present themselves on every hand. The autumn work proper has been much delayed, and the delay has increased it. If we take October as the first month of a new agricultural year, which, we believe, is the proper thing to do, we shall speak, as does a well-known journal, of the legacy of weeds left by the last few months of the past year. Weeds everywhere! and with this soft, mild weather they are increasing on every hand.

There is one advantage about a dry time—weeds once out of the land will die without much effort on our part. To-day we saw great heaps of rubbish that had been carefully forked out and placed together, with a view to ultimate burning. There is no prospect of that, for those heaps are all "a-growing and a-blowing," and how they are going to be destroyed we do not quite see. The tiniest bit of twitch or couch-grass is as full of life as though it had never been treated to a turn of the harrow or scarifier. Some of the land that was got ready for Wheat-sowing is as green as good old pastures. There has been no such thing as eating down with stock: there is not stock enough to do it. Now is the time for those advocates of green crop manuring, but all land won't stand that treatment. It requires a big hole in which to bury all the green stuff of this year; and it is only on deep soils where the plough can penetrate low enough that this practice can be followed. And then, even then, twitch, though buried, is not of necessity dead. How some of the Wheat stubbles are going to be cleared we hardly know. We should welcome a high wind and a drying sun, and that not for one day, but for many.

Numerous farmers will be turning their attention to the preparation for sowing of Vetches, one of the most valuable fodder crops known, and, unlike Lucerne and Trifolium, will appear to flourish north, south, east and west. We have heard of fourteen tons per acre on the borders; but we should feel satisfied with less. Stubbles must be well broken up and all weeds removed, a process that cannot fail of making the soil friable. There must be a contribution, and

a heavy one, from the fold-yard, in the shape of well-rotted manure. It must be remembered that a heavy crop is expected, therefore it must be well fed: this must be ploughed in, and then the land is ready for sowing. In sowing Tares or Vetches, it must be borne in mind that, should the winter be a severe one, some plants will probably perish; hence it is of importance to put on plenty of seed, say three bushels to the acre: to this add one bushel of winter Oats. On really good soil, generously treated, the crop will be fit to cut by the second week in May, or perhaps even earlier.

As a rule in May, green keep is not very abundant, and therefore the Tare crop is of immense value. There is no stock on a farm which will not eat Tares with avidity, and also with great benefit to themselves. Tares are eminently suited for horse-feeding, in shed or stall; and they greatly improve the quality of milk, i.e., add to its butter-fat. We are not sure whether, during exceedingly hot weather, cows are not as well kept in their byre during the day and turned out to graze at night; and they will pass their time profitably indoors if supplied with Tares and plenty of water. They will enjoy their nights out and benefit much more from the grass than they possibly could do under a blazing sky.

We have most of us experienced the difficulties of "finishing off" what ought to be fat stock in the early summer months. Roots are done, and grass far from abundant (grass has a way of running off when least expected); and hand food alone is too expensive. A little hand food, however (cake and crushed corn), with liberal rations of Tares, will bring beasts to that point of perfection that the butcher desires. It is possible—easily possible—with good management to get bumper crops, and the farmer should not be satisfied unless he gets out of the land up to the last ounce.

We used the word "management" a line or two back. Now, to a Yorkshireman's mind that would convey a rather different idea than to the outsider. The old-fashioned, old-world farmer, when he spoke of management, meant "muck"; and really, perhaps he was right; in this case certainly, for muck seems to be the great factor for success.

Rural Districts and Milk Supply.

We have met with an indictment against the rural districts. We have touched on the subject before, but it looms largely before us again—the country districts are supposed to be superior to the towns on account of the fresher air, fresh milk, fresh eggs. The air is still in its pristine purity; but milk is often terribly scarce. There are good dairy cows in every pasture; plenty of milk is produced, but it is not for home consumption. There is such a call from the towns for milk that they literally drain the country. The milk is cooled in the sheds, canned, and sent off to the nearest station, and little or none is left at home. We know many farmers who never make a pound of butter, and who, if an extra supply of cream is needed in the house, have to procure it from some small dairy, where the quantity of milk produced is not sufficient to be worth sending far afield. Unfortunately these small people are rather, if anything, on the decrease; or the little they have of milk is converted into butter.

We always rather run into extremes. There was a time when all milk was utilised at home: there is a time (the present) when the idea seems to hold that it is best to send all away, and the farther off the better! This falls very hard on the villager, other than the farmer, and really many country children get less milk than their town relatives. Many farmers will let their own men have milk on easy terms, and this is as it should be; but what of those households that are not immediately connected with the farms? Some idea of the growth of the milk traffic will be arrived at when we quote some facts given at the Frome agricultural dinner a fortnight ago, by the Marquis of Bath. He instanced one station, that of Frome. In 1892 the export (if we may so express it) of milk was 161,791 gallons; in 1903 the export was 734,586 gallons. What makes this more remarkable is that Frome is the centre of a large cheese-making district, and we do not hear there is any serious diminution in the cheese output.

Somerset, as some people may know, has a school for cheese-making in connection with the Bath and West of England Counties Society, under the immediate management of the C.C. The school is at Manor Farm, Woolston, and the second draft of cheese (74cwts) has just been sold at 65s. per cwt of 112lbs. The milk used was 8,875 gallons, and the green cheese amounted to 8,903lbs. When sold at the end of fourteen weeks, there was a shrinkage of nearly seven per cent. We have often wondered that more girls do not study for cheese-making, as the field is not so well stocked as

that of dairy work (ordinary). There is certainly only employment during the summer months, but the pay is good; and as the summer work is arduous, the cheese-maker is not averse to the winter's rest.

The London Dairy Show.

The Dairy Show at the Agricultural Hall is again a thing of the past. Its popularity does not decrease, and our own opinion is that this show is, perhaps, from a practical point of view, the most useful of any agricultural exhibition. It is a sign of winter when we read that entries for the Smithfield Fat Stock Show will close in about ten days: truly, the seasons do succeed one another with great rapidity.

Those of us who are milk producers will either have made or be just on the point of making, contracts for the whole of one winter delivery. Happily, most of us are well fixed in the matter of hay, roots, and straw for bedding. We fancy a good deal of home-grown corn will never see the market except in the forms of milk and beef. How far this is a wise policy is a matter of argument in every class paper one takes up. We know it is very often the case that the home stock is made to eat up what is little better than rubbish: the idea seems to be rather filling than feeding; and the digestive organs are sadly overloaded and overworked without any proportionate benefit. We have heard of cats and dogs being spoken of as sanitary dustbins; and we greatly suspect if our horses and bullocks had the gift of speech they could tell of many unsatisfactory rations of fusty hay and corn that was all husk or sprout!

Work on the Home Farm.

Deluge upon deluge! Two fine days out of seven, and on those threshing was the only thing possible. Such is the record of another week. October is fast passing away, and no October work is done. Happily, we have no corn out, but how hapless is the case of those unfortunates who have. We had not to leave home very far the other day to see Oats standing green, in sheets of water, and sheaves floating about. Whole districts of Potatoes are under water and practically worthless, and very few have yet been lifted. It is not pleasant either to write or think of.

Recent threshings have been more unsatisfactory than ever. The sides of stacks have no chance to get dry, and the condition of the grain is worse than it was when stacked. Wheat is as bad as Barley, and very little of it is dry enough for seed purposes. We urge our friends to procure dry seed if possible; the seed bed must be a wet one now, and damp seed will be more likely to swell and burst than germinate. We fear much Barley is heated in the stacks. Barley stacks have dropped in height in a very ominous manner. We have seen one sample of Barley at 34s., and another at 16s., grown in an adjacent field, but badly got and heated. Good Barley must pay for keeping, if the owner can hold it.

There has been a little occupation for the men in the granary, dressing and weighing up Wheat. There has also been some work at opening grips and letting surface water into the dikes. The land is so sodden, and the rainfall so heavy, that the water could not possibly get away by drainage in the ordinary way.

Sheep have been very uncomfortable on Turnips, even on fairly dry land, and they have been changed to grass, of which there is too much. Fat cattle are doing no good even with cake, and would be better up; but it is not yet convenient to find the labour needed for stall-feeding. The reared calves—in fact, all those under twelve months—are now up at night and eating hay; the grass now is not suitable food for young things, as a sole diet.

Potato disease has had the expected effect on the pig market. All store pigs of any age or size are dearer, and the supplies of pork have decreased sufficiently to raise the price of small weight to 6d. per lb. Although it has been warm enough, the wet has been bad for laying hens, and the fresh egg supply is almost nil.

The breeding ewes are on new seeds, as we have no rape for them, but the seeds are full of good meat, and there are a few ears of Barley to be picked up. We saw some pigs being tented in a field quite lately:—a rare sight, nowadays, but especially in October.

PROLIFIC FARROWING.—Cases of prolific farrowing are reported from time to time, but an experience of Mr. J. E. B. Cowper, Gogar House, Edinburgh, in the pig-rearing line will be bad to beat. Last week, Mr. Cowper had a cross-bred large Yorkshire sow which gave birth to no fewer than twenty-one pigs. The pigs were all born alive, and although naturally not of the biggest class, were all healthy looking and vigorous. It is quite expected that the bulk of them, with a little artificial help in nursing, will be easily brought on to the stage when they can find for themselves. On the following morning Mr. Cowper had another sow which farrowed fourteen pigs, both litters being by a pure-bred large Yorkshire boar.

PLANTING SEASON



PAULS' ROYAL NURSERIES

WALTHAM CROSS, HERTS.

12 miles from London. South Entrance four minutes' walk from Waltham Cross Station; West Entrance three minutes' walk from Theobald's Grove; both Stations on the Great Eastern Railway.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Gold Medals in 1903 from Royal Horticultural and Royal Botanic Societies.

FRUIT TREES for the Orchard, Garden, and Forcing House. Hogg Memorial Medal, 1901.

HARDY TREES for Streets, Parks, and General Planting. Silver Medal from Royal Agricultural Society of England.

SHRUBS, both Evergreen and Deciduous.

CLIMBING PLANTS, Hardy and Greenhouse.

RHODODENDRONS, CAMELLIAS, & AZALEAS.

HERBACEOUS PLANTS in great variety.

BULBS and SEEDS, and all Garden Sundries.

PRICE LISTS ON APPLICATION. INSPECTION INVITED. Upwards of 1000 Medals, Prizes, and other Awards at leading Exhibitions during the past 42 years.

SOLE POSTAL ADDRESS—

WM. PAUL & SON,
WALTHAM CROSS, HERTS.

Rose Growers by Appointment to His Majesty the King.

TO THE TRADE!

DUTCH BULBS

FRENCH BULBS! and ENGLISH BULBS!

SEE OUR SPECIAL CATALOGUE OF BULBS.

Containing List of all the Best Varieties of HYACINTHS, TULIPS, CROCUS, LILiums, DAFFODILS, SNOWDROPS, IRIS, PÆONIES, &c., free on application. Please compare our prices before sending your orders abroad.

WATKINS & SIMPSON,

SEED AND BULB MERCHANTS,

12, TAVISTOCK ST., COVENT GARDEN, LONDON, W.C.

ORCHIDS.

CLEAN HEALTHY PLANTS AT LOW PRICES.

Always worth a visit of inspection. Kindly send for Catalogue.

NEW LIST NOW READY.

JAMES CYPHER AND SONS,

Exotic Nurseries, CHELTENHAM.

1500,000 BULBS.

Spanish Iris, Yellow, White, and Blue	7/6 per 1000.
Crocus, all colors	5/6 per 1000.
Sir Watkin Narcissus	5/6 per 100.
Horsefieldii	5/6 per 100.
Trumpet Narcissus	7/6 per 1000
Glory of Leiden Narcissus	6d. each.
Madam de Graaff	3/6 each.
Sweet Scented Pheasant Eye	
Narcissus	5/6 & 7/6 per 1000.
Mixed Narcissus	5/6 per 1000
Double Daffodils	5/6 & 10/6 per 1000
Tulips, Mixed (choice)	2/6 per 100.
Single Lent Lilies	3/6 per 1000
Snowdrops	5/6 & 7/6 per 1000.
Strawberry Plants	1/6 per 100.

SEND FOR LISTS BEFORE ORDERING ELSEWHERE.

Cross & Son, Wisbech.

CLIBRANS
SELECT ROSES.

OUR ROSES, grown in a cool northern climate, invariably give the utmost satisfaction to purchasers. We make Rose-growing a special feature.

Dwarf Hybrid Perpetuals, in choice variety, 6/- to 9/- per doz., 40/- to 65/- per 100. Extra strong, in pots for forcing, 1/6 to 3/6 each, 15/- to 36/- per doz.

Moss Roses, in lovely variety, 6/- per doz., 45/- per 100.

Teas and Hybrid Teas, in choice and beautiful sorts, 10/- to 12/- per doz. In pots, 15/- per doz.

Noisettes, in finest variety, 10/- and 12/- per doz.

China Roses, in select sorts, 6/- to 12/- per doz.

Polyantha Roses, from 9/- per doz

China and Bourbon Hybrids, in fine variety, 6/- doz.

Climbing Roses, in fine variety, 9/- to 12/- per doz.

Penzance Briars, a comparatively new, but very beautiful class of Rose, 9/- to 15/- per doz.

Species of Roses.—These have now attained a remarkable popularity, particularly for planting in the Wild Garden. We grow all the most suitable, particulars of which will be found in our Catalogue.

Above prices are for our selection only, and are carriage paid to customers' nearest railway station.

ROSES IN POTS.

We have a very special line in T. and H.T. Roses in 7in. pot, with shoots 8 to 12ft. in length; strong, healthy, and well-ripened, at 2/6, 3/6 and 5/- each.

WRITE FOR OUR NEW

TREE, SHRUB & ROSE LIST,
GRATIS AND POST FREE.

ALTRINCHAM & MANCHESTER

GRAND NOVELTIES

IN

Alpine & Herbaceous Plants

WM. CUTBUSH & SON'S LIST IS NOW READY

and may be had free upon application. Everyone interested in good Hardy Plants should obtain a copy, as it contains some Sterling Novelties.

HIGHGATE NURSERIES, LONDON, N.,

And BARNET, HERTS.

BULBS

EXTENSIVE COLLECTIONS OF

Hyacinths | **Snowdrops**
Tulips | **Crocuses**
Narciss | **Scillas**
Liliums | **&c.**

Best qualities at most moderate rates.

Delivered Free by Rail or Parcel Post.

DESCRIPTIVE CATALOGUE 574 POST FREE

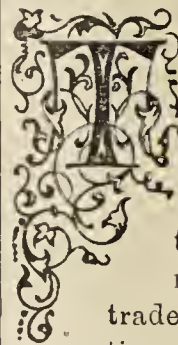
DICKSONS BULB GROWERS, **CHESTER**



Journal of Horticulture.

THURSDAY, OCTOBER 29, 1903.

Rose Analysis 1896-1903.



THE demand for Roses is increasing so rapidly every year that any trustworthy guide to the selection of varieties for various purposes must always be welcome at this season. To the novice, the number of sorts described in the trade catalogues as worthy of his attention cannot but make the choice of varieties more or less bewildering. Added to this, Roses are divided into so many different sections, concerning the distinctive characteristics of which he can have but little, if any, knowledge, that the matter of selection is rendered still more puzzling. To those who have a fair knowledge of Rose culture such a guide cannot fail to be helpful and, at the same time, interesting. Truth to tell, even the expert rosarian has his own special difficulties in selecting, for it is almost impossible in the present day to keep in touch with more than a limited number of the hundreds of varieties now in cultivation, and to understand all their "manners and customs" and the purposes for which they are best adapted.

As regards the present analysis and those of a similar character which have, in years gone by, preceded it, the idea has always been to base the results obtained upon facts rather than upon opinions—or, I should say, upon the opinions of exhibitors as demonstrated by their actions. With this object, for the last seventeen years, the name of every Rose in the first, second and third prize stands has been taken down at the leading Rose show of the season. By the leading Rose show of the year I, of course, mean that held by the National Rose Society for many years at the Crystal Palace and for the last three years in the Temple Gardens. The results thus obtained are afterwards tabulated, and the varieties arranged in the accompanying tables

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

according to the average number of times each Rose was staged at the last eight metropolitan exhibitions of the Society. This applies to rather more than two-thirds of the varieties which find places in those tables.

For the sorts of more recent introduction the longest trustworthy averages obtainable are given them instead. The still newer kinds are further dealt with in a special audit,

the results of which are given at the close of that part of this article which has reference to Roses for exhibition purposes. After this audit will be found carefully compiled lists of the best Roses in all sections for cultivation.

The Rose season of 1903, like that of the previous year, proved an extremely backward one, and as the date of the National Show was again unusually early the later flowering

HYBRID PERPETUALS AND HYBRID TEAS.

Position in Present Analysis.	Average Number of Times Shown.	No. of Times shown in 1903 in True Relative Proportion to the Average.	Name.	Date of Introduction.	Raiser's or Introducer's Name.	Colour.
1	46.0	46	Bessie Brown, H.T.	1899	A. Dickson & Sons ..	Creamy white
2	43.6	42	Mrs. John Laing.....	1887	Bennett.....	Rosy pink
3	39.3	41	Caroline Testout, H.T.	1890	Pernet-Ducher.....	Light salmon pink
4	37.2	31	Ulrich Brunner	1881	Levet	Cherry red
5	35.0	42	Marquise Litta, H.T.....	1893	Pernet-Ducher	Carmine rose, bright centre
5	35.0	36	Mrs. W. J. Grant, H.T.....	1895	A. Dickson & Sons..	Bright rosy pink
7	34.0	32	Mrs. R. G. Sharman Crawford	1894	A. Dickson & Sons ..	Clear rosy pink
8	32.8	34	Kaiserin Augusta Victoria, H.T.....	1891	Lambert & Reiter ..	Cream, shaded lemon
9	32.4	41	La France, H.T.....	1867	Guillot	Silvery rose, shaded lilac
10	30.7	25	A. K. Williams	1877	Schwartz	Bright carmine red
11	26.5	27	Gustave Piganeau	1889	Pernet-Ducher.....	Shaded carmine
12	26.2	5	Her Majesty	1885	Bennett	Pale rose
13	24.6	31	Madame Gabriel Luizet	1877	Liabaud	Light silvery pink
14	24.0	12	Captain Hayward	1893	Bennett	Scarlet crimson
15	23.7	17	Suzanne M. Rodocanachi.....	1883	Lévêque.....	Glowing rose
16	21.2	18	Horace Vernet	1866	Guillot	Scarlet crimson, dark shaded
*17	19.0	19	Frau Karl Druschki	1900	Lambert	Pure white
*17	19.0	19	Mildred Grant, H.T.....	1901	A. Dickson & Sons ..	Ivory white, shaded pink
17	19.0	25	White Lady, H.T.	1890	W. Paul & Son	Creamy white
20	18.2	25	Helen Keller.....	1895	A. Dickson & Sons ..	Rosy cerise
20	18.2	14	Marie Baumann	1863	Baumann	Soft carmine red
22	17.0	18	Ulster.....	1899	A. Dickson & Sons..	Salmon pink
23	16.4	20	Prince Arthur	1875	B. R. Cant	Bright crimson
24	15.7	7	Alfred Colomb.....	1865	Lacharme	Bright carmine red
24	15.7	12	Margaret Dickson	1891	A. Dickson & Sons ..	Ivory white
26	15.5	12	Dupuy Jamain.....	1868	Jamain	Bright cerise
26	15.5	12	François Michelon	1871	Levet	Deep rose, reverse silvery
28	14.7	14	Charles Lefebvre.....	1861	Lacharme	Purplish crimson
29	14.1	3	Marchioness of Londonderry	1893	A. Dickson & Sons ..	Ivory white
30	13.5	11	Killarney, H.T.	1898	A. Dickson & Sons ..	Pale pink, shaded white
31	13.0	3	Earl of Dufferin	1887	A. Dickson & Sons ..	Dark crimson, shaded maroon
32	12.4	12	Marchioness of Downshire	1894	A. Dickson & Sons ..	Light pink, shaded rose
33	12.2	16	Lady Mary Fitzwilliam, H.T.....	1882	Bennett	Rosy flesh
34	12.1	7	Duke of Wellington	1864	Granger.....	Bright shaded crimson
35	11.7	8	Etienne Levet	1871	Levet	Carmine rose
36	11.1	13	Général Jacqueminot.....	1853	Roussel	Bright scarlet crimson
37	11.0	12	Countess of Caledon, H.T.	1897	A. Dickson & Sons ..	Carmine rose
37	11.0	4	Fisher Holmes	1865	E. Verdier.....	Shaded crimson scarlet
37	11.0	6	Marchioness of Dufferin	1891	A. Dickson & Sons ..	Pink
37	11.0	5	Victor Hugo	1884	Schwartz	Dazzling crimson, shaded
41	10.9	9	Comte de Raimbaud	1868	Roland	Clear crimson
42	10.7	7	Duke of Edinburgh	1868	Paul & Son	Scarlet crimson
43	9.3	7	Tom Wood	1896	A. Dickson & Sons ..	Brownish red
44	8.9	5	Dr. Andry.....	1864	E. Verdier.....	Bright crimson
45	8.4	5	Xavier Olibo.....	1864	Lacharme	Dark velvety crimson
46	8.1	7	E. Y. Teas.....	1874	E. Verdier.....	Bright red
47	8.0	7	Beauty of Waltham	1862	W. Paul & Son.....	Rosy crimson
47	8.0	4	Louis Van Houtte	1869	Lacharme	Deep crimson, shaded maroon
49	7.9	8	Heinrich Schultheis	1882	Bennett	Pinkish rose
50	7.4	6	Duke of Teck	1880	Paul & Son	Light crimson scarlet
51	7.2	5	Ferdinand de Lesseps	1869	E. Verdier.....	Shaded crimson
51	7.2	3	Madame Eugène Verdier	1878	E. Verdier.....	Silvery rose
51	7.2	12	Souvenir du President Carnot, H.T.	1895	Pernet-Ducher	Flesh, shaded white
54	7.1	0	Marie Verdier	1877	E. Verdier.....	Pure rose
55	7.0	6	Madame Cadeau-Ramey, H.T.	1896	Pernet-Ducher	Rosy flesh, yellow base
56	6.4	6	Duchess of Bedford	1879	Postans	Light scarlet crimson
57	6.2	0	Jeannie Dickson	1890	A. Dickson & Sons..	Soft silvery rose
57	6.2	6	Rev. A. Cheales	1896	Paul & Son	Pure lake, silvery white reverse
59	6.1	3	Camille Bernardin	1865	Gautreau	Light crimson
60	6.0	7	Exquisite, H.T.	1899	W. Paul & Son	Crimson
60	6.0	3	Mrs. Cocker	1899	Cocker	Pale pink
62	5.9	0	Baroness Rothschild	1867	Pernet	Light pink
62	5.9	5	La Havre	1871	Eude	Vermilion red
64	5.6	1	Duchesse de Morny	1863	E. Verdier.....	Silvery rose
65	5.5	4	Papa Lambert, H.T.	1899	Lambert	Pinkish rose
*66	5.0	5	Gladys Harkness, H.T.....	1900	A. Dickson & Sons..	Deep salmon pink, silvery reverse
*66	5.0	5	Mamie, H.T.	1901	A. Dickson & Sons..	Rose carmine, yellow base
*66	5.0	5	Robert Scott, H.T.....	1901	A. Dickson & Sons..	Clear rosy pink

* New varieties, whose positions are dependent on their records for the 1903 show only.

Roses were consequently placed in both years at a great disadvantage as compared with those which come into bloom earlier in the summer. Fortunately, however, for our present purpose, the number of early and late seasons were almost equally divided in the eight years covered by this analysis.

It will be noticed that Bessie Brown still maintains the lead it secured last year over Mrs. John Laing—which variety had previously held the premier position in the table of Hybrid Perpetuals and Hybrid Teas for ten consecutive years. This is, I think, to be regretted, for Mrs. John Laing is not only a grand exhibition Rose, but also an equally dependable variety for ordinary garden cultivation. Bessie Brown, on the other hand, although unsurpassed for exhibition purposes, is so excessively modest that she is almost invariably to be seen with her head bent, instead of holding it erect, as any well-conducted "garden" Rose should do. The positions of the leading four varieties remain as in the previous analysis. In fact, with the exception of Marquise Litta and Gustave Piganeau, both of which have risen two places, there are no changes worth mentioning in the first twelve sorts.

Of the established kinds, Marquise Litta has never before in the last eight years been as frequently shown as it was this year, and in the same period La France, Madame Gabriel Luizet, White Lady, and Prince Arthur only once before. On the other hand, A. K. Williams, Captain Hayward, Earl of Dufferin, and Etienne Levet have in no previous year been as indifferently represented, while the records for Her Majesty, Marie Baumann, Alfred Colomb and Dupuy Jamain are almost equally poor. The above results were, no doubt, principally brought about by the backward season favouring the early to the disadvantage of the late flowering kinds. Judging by the last two exhibitions of the Society the best Roses for an exhibitor to grow in a backward district for the early shows would be the following:—Caroline Testout, Marquise Litta, Mrs. W. J. Grant, Kaiserin Augusta Victoria, La France, Madame Gabriel Luizet, White Lady, Helen Keller and Prince Arthur.

The gradual decline of the crimson H.P.'s in our exhibition stands in recent years is much to be deplored, as most of them are not only splendid examples in themselves, but also serve to brighten up and enhance the beauty of their less florid neighbours. We have only to compare the analysis issued five years ago with the present one in order to see how marked this decline has been, even during that short period. In fact, only Captain Hayward, Horace Vernet, Prince Arthur, Général Jacqueminot, Comte de Raimbaud, and Xavier Olibo now occupy as good positions as they did in 1898, whereas Ulrich Brunner has lost two places, A. K. Williams seven places, Marie Baumann eight places, Alfred Colomb eight places, Charles Lefebvre ten places, Earl of Dufferin eleven places, Dupuy Jamain four places, Etienne Levet twelve places, Fisher Holmes twelve places, Duke of Wellington eight places, and so on throughout the list.

At exhibitions there may be some reason for this revolt against the H.P.'s, but it becomes altogether unmeaning when applied to our gardens. They may not be, as a rule, such good bedding Roses as the Hybrid Teas, but they are altogether indispensable for other purposes. For instance, in my own garden I should have had no Roses worth looking at during the greater part of the present wet autumn, but for these grand crimson and dark crimson Hybrid Perpetuals. Then, again, how few Hybrid Teas can compare in fragrance with Ulrich Brunner, A. K. Williams, Marie Baumann, Alfred Colomb, Charles Lefebvre, Earl of Dufferin, Général Jacqueminot, Dr. Andry, E. Y. Teas, Louis Van Houtte, or Maurice Bernardin?

The Advance of the Hybrid Teas.

On the other hand, the advance of the Hybrid Teas has been equally pronounced during the same five years. For example, in the 1898 analysis there were only nine Hybrid Teas on the list; now there are exactly double that number, besides which the following varieties with places in this year's analysis: Bessie Brown, Mildred Grant, Killarney, Countess of Caledon, Souvenir du President Carnot, Madame Cadeau-Ramey, Exquisite, Papa Lambert, Gladys Harkness, Mamie and Robert Scott, are not to be found at all in the list for 1898. There are many charming pink, rose, and creamy white varieties among these new H.T.'s, but, alas! no crimson, with the single exception of Exquisite, which only finds a place at No. 60.

No fewer than eleven new Roses—varieties sent out during the last five years—will be found in the table. The only 1898 variety is Killarney (No. 30), which occupies about the same position as in the previous analysis. Would that we had many more such Roses—Roses which are good for exhibition, and, at the same time, even more indispensable in the garden. Five new sorts are placed to the credit of 1899. Bessie Brown, which, as before stated, for the second time in succession heads the list of Hybrid Perpetuals and Hybrid Teas.

Next comes Ulster (No. 22), which has risen three places. Then lower down we reach the handsome Exquisite (No. 60), which makes its appearance for the first time in the table. Then Mrs. Cocker, also at No. 60, which has fallen fourteen places, and lastly Papa Lambert (No. 65), which has not improved upon its last year's position. Of the varieties distributed in 1900, Frau Karl Druschki, although new to the analysis, takes up a position at No. 17. This is in itself a remarkable performance for any new Rose, and only shows what a general favourite with exhibitors this beautiful pure white H.P. has already become. Years ago we had to be content with Madame Lacharme, which came out as a white H.P. in 1873, and since then we have welcomed in turn Mabel Morrison (1878), Violette Bouyer (1881), Merveille de Lyon (1882), White Baroness (1888), Margaret Dickson (1891), and Marchioness of Londonderry (1893), but none nearly as warmly as we now welcome this sterling acquisition—Frau Karl Druschki.

In the first place it is pure white, which none of its predecessors can lay claim to be, added to which it has a good, vigorous habit, and is moreover one of the freest flowering, if not the most continuous flowering, of all the Hybrid Perpetuals. The raiser of this remarkable Rose—and all honour be to him—is Peter Lambert, of Trier, in Germany. Gladys Harkness, the other variety of the same year, will be found at No. 66. The remaining new kinds are Mildred Grant, Mamie, and Robert Scott, which were sent out the year before last. Mildred Grant, ivory white in colour, is one of the largest exhibition Roses, if not the largest, in cultivation. Its popularity with exhibitors is already assured. It has performed the same feat as Frau Karl Druschki in rising at once to No. 17 on the list. At present it has shown itself but a moderate grower.

Mamie and Robert Scott, on their first appearance, take up places at the end of the list. Of the above new varieties Frau Karl Druschki and Papa Lambert came to us from Germany, while the remaining nine are of British origin, no fewer than seven of them having been sent out by one firm alone—Messrs. A. Dickson and Sons, of Newtownards, in Ireland.

Teas and Noisettes. (Table on next page.)

If we next direct our attention to the table of Teas and Noisettes we shall at once see what a disastrous year the past one has been for the Roses in this charming section. In fact, the season appears to have especially favoured only three varieties on the list, viz., Medea, Cleopatra, and Anna Olivier. As regards Medea, it was to be seen in nearly every stand. In previous years its records have varied from 14 to 27, but at the last exhibition it was staged no fewer than forty-seven times, or rather more frequently than any other Rose in the show; while Cleopatra (No. 18) and Anna Olivier (No. 22) have never before been as largely shown.

Nearly all the other Teas were more or less indifferently represented. Maman Cochet still stands at the head of the table, but has never before been as sparsely exhibited, and the same may be said of White Maman Cochet, while such old and tried favourites as Catherine Mermet, The Bride, Comtesse de Nadaillac, Bridesmaid, Madame de Watteville and Maréchal Niel have at no previous exhibition appeared in as few stands, even if we go back for fourteen, and in some cases even seventeen years.

There are four Teas on the list which were sent out during the last six years, and consequently may be regarded as new varieties. That grand lemon-white sport from Maman Cochet, White Maman Cochet, is the sole representative of 1897. It was placed second on the list last year, but now stands at No. 3. There can be little doubt, however, that in the next analysis it will be found to have regained its former position. Mrs. Edward Mawley, which was distributed in 1899, still remains at No. 5, and appears to be as great a favourite as ever.

We now come to two new yellow, or rather orange coloured T.'s and N.'s, both of which came out in 1902. The first of these, Souvenir de Pierre Notting, secures a place on its first appearance at No. 28, while the other, Lady Roberts,

also a new-comer, will be found at No. 32. We all know how limited are the number of good yellow exhibition Roses, and therefore, as we rejoice in the fine form this year of the

pale yellow Medea, so shall we watch with keen interest the future progress of these two new candidates for honours. Our next section is the garden Roses.

TEAS AND NOISETTES.

Position in Present Analysis.	Average Number of Times Shown.	No. of Times Shown in 1903 in True Relative Proportion to the Average.	Name.	Date of Introduction.	Raiser's or Introducer's Name.	Colour.
1	45.6	33	Maman Cochet.....	1893	Cochet	Deep flesh, suffused light rose
2	37.1	29	Catherine Mermet	1869	Guillot	Light rosy flesh
3	37.0	26	White Maman Cochet	1897	Cook	White, tinged lemon
4	36.7	26	The Bride.....	1885	May	White, tinged lemon
5	33.5	33	Mrs. Edward Mawley	1899	A. Dickson & Sons ..	Pink, tinted carmine
6	31.2	11	Comtesse de Nadaillac	1871	Guillot	Peach, shaded apricot
7	29.5	34	Souvenir de S. A. Prince	1889	Prince	Pure white
8	29.0	22	Madame Cusin.....	1881	Guillot	Violet rose
9	27.2	21	Innocente Pirola	1878	Madame Ducher	Creamy white
10	26.0	29	Madame Hoste	1887	Guillot	Pale lemon yellow
11	25.2	16	Bridesmaid	1893	May	Bright pink
12	24.7	47	Medea	1891	W. Paul & Son	Lemon yellow
13	24.6	27	Souvenir d'un Ami.....	1846	Belot-Defougère	Pale rose
14	22.5	16	Souvenir d'Elise Vardon	1854	Marest	Cream, tinted rose
15	22.0	19	Muriel Graham.....	1896	A. Dickson & Sons ..	Pale cream, flushed rose
16	19.3	6	Madame de Watteville	1883	Guillot	Cream, bordered rose
17	18.4	4	Maréchal Niel (N.)	1864	Pradel	Deep bright golden yellow
18	16.9	28	Cleopatra	1889	Bennett	Creamy flesh, shaded rose
19	16.2	7	Ernest Metz.....	1888	Guillot	Salmon, tinted rose
20	14.4	9	Marie Van Houtte.....	1871	Ducher	Lemon yellow, edged rose
21	14.1	11	Honourable Edith Gifford	1882	Guillot	White, centre flesh
22	14.0	31	Anna Olivier	1872	Ducher	Pale buff, flushed
23	13.9	10	Caroline Kuster (N.)	1872	Pernet	Lemon yellow
24	12.7	16	Princess of Wales	1882	Bennett	Rosy yellow
25	12.6	5	Niphotos	1844	Bougère.....	White
26	11.2	11	Golden Gate.....	1892	Dingee & Conard ..	Creamy white, tinted rose
27	9.5	22	Rubens	1859	Robert	White, shaded creamy rose
*28	9.0	9	Souvenir de Pierre Notting	1902	Souper et Notting ..	Apricot yellow, shaded orange
29	8.6	3	Ethel Brownlow	1887	A. Dickson & Sons ..	Rosy flesh, shaded yellow
30	8.0	5	Jean Ducher	1874	Madame Ducher	Salmon yellow, shaded peach
31	6.4	7	Madame Bravy	1848	Guillot	White, flushed pink
*32	5.0	5	Lady Roberts	1902	F. Cant & Co.	Rich apricot

* New varieties, whose positions are dependent on their records for the 1903 shows only.

"Garden" or Decorative Roses.

See table on opposite page.

It may, perhaps, be advisable to explain once more that by "garden" Roses is meant those varieties which are either not sufficiently large or not sufficiently regular in form to allow of the individual blooms being set up singly at shows in boxes—like the Roses with which we have previously been dealing. These garden or decorative Roses, instead of being staged separately like the exhibition varieties, are displayed in large bunches, and the stands containing them now form some of the most interesting and attractive features of our modern Rose shows. In the following table the varieties are arranged according to the average number of times they were staged in prizewinning stands at the last four Metropolitan exhibitions of the National Rose Society, and no Rose has been included which has not been exhibited at one or other of those shows three or more times.

In the new class for summer flowering Roses at the last two exhibitions the following old-fashioned garden Roses were shown. A list of these may prove of interest to some of your readers, as among them will be found varieties which are now very seldom seen. I append a list of some of the oldest of these: Amadis (Boursault), Blairii No. 2 (H.B.), Celestial (Alba), Commandant Beaurepaire (Gallica), Comtesse de Murinais (Moss), Crested Moss (Moss), Coupe d'Hébé (H.N.), De Meaux (Provence), Dometil Beccard (Provence), Double Yellow (Scotch), Flora (Evergreen), Hebe's Lip (Sweet Briar), Julie de Mersent (Moss), Juno (H.C.), Ma Surprise (Microphylla), Madame D'Arblay (Musk), Old Black Moss (Moss), Perle d'Angers (Boursault), Prolific (Moss), Reine Blanche (Moss), Tuscany (Gallica).

I have again to thank those kind friends who year after year, on a busy show day, have assisted me in taking down the

names of the Roses in the prize stands, and have thus rendered these analyses possible.

An Audit of the Newer Exhibition Roses.

The audit given below has been introduced for the benefit of the varieties of recent introduction, which it is impossible to place accurately in the tables, owing to their limited records, and to the disturbing influence of a single favourable, or unfavourable, season upon those records. Each of the following voters was requested to place the fourteen H.P.'s and H.T.'s on the audit paper in what they considered their order of merit as exhibition Roses, and to deal in the same way with the Teas.

In calculating the number of votes, it should be understood that a first place vote in the case of the former list is counted as fourteen votes, a second as thirteen votes, and so on. In the case of the Teas a first place vote is only reckoned as three votes, a second as two votes, and a third as one vote, as there are only three candidates on that list, as compared with fourteen in the other one.

AMATEURS.—Mr. J. Bateman, Rev. H. B. Biron, Mr. W. Boyes, Rev. F. R. Burnside, Rev. A. Foster-Melliar, Dr. J. C. Hall, Mr. R. Foley Hobbs, Mr. Conway Jones, Mr. H. V. Machin, Mr. O. G. Orpen, Rev. F. Page-Roberts, Rev. J. H. Pemberton, Mr. A. Slaughter, Mr. A. Tate and Mr. R. E. West.

NURSEYMEN.—Messrs. G. Burch, J. Burrell, C. E. Cant, Frank Cant, A. Dickson, Hugh Dickson, John Green (Hobbies, Ltd.); W. J. Jefferies, J. R. Mattock, H. Merryweather, jun., G. Mount, G. Paul, W. Paul, W. D. Prior, J. Townsend and A. Turner.

Special Audit of the Newer H.P.'s and H.T.'s.

Position in Audit.	Name.	Total No. of Votes.	Votes by Amateurs.	Votes by Nurserymen
1	Mildred Grant (1901), H.T.....	391	188	203
2	Bessie Brown (1899), H.T.....	367	174	193
3	Frau Karl Druschki (1900).....	339	159	180
4	Florence Pemberton (1902), H.T.	273	124	149
5	Alice Lindsell (1902), H.T.	257	116	141
6	Ulster (1899)	223	93	130
7	Duchess of Portland (1901), H.T.....	220	100	120
8	Papa Lambert (1899), H.T.	211	88	123
9	Ben Cant (1902).....	210	114	96
10	Gladys Harkness (1900), H.T.	178	79	99
11	Lady Moyra Beauclerc (1901), H.T....	173	72	101
12	Mrs. Cocker (1899)	162	70	92
13	Edith Dombrain (1902), H.T.	149	70	79
13	Mamie (1901), H.T.	149	74	75

Teas.

1	Mrs. Edward Mawley (1899)	88	45	43
2	Souvenir de Pierre Notting (1902)....	57	28	29
3	Lady Roberts (1902).....	37	17	20

Placed according to their dates of introduction, the above varieties arrange themselves as follows: *Hybrid Perpetuals and Hybrid Teas*—1899, Bessie Brown, Ulster, Papa Lambert, Mrs. Cocker; 1900, Frau Karl Druschki, Gladys Harkness; 1901, Mildred Grant, Duchess of Portland, Lady Moyra Beauclerc, Mamie; 1902, Florence Pemberton, Alice Lindsell, Ben Cant, Edith Dombrain. *Teas*—1899, Mrs. Edward Mawley; 1902, Souvenir de Pierre Notting, Lady Roberts.

Roses for General Cultivation.

The following lists have been drawn up with a view to assist those who have but little knowledge of the different kinds of Roses in making a selection for their own garden. All the established varieties are arranged under the various headings, according to their order of merit, so that however small the number of Roses required may be, a satisfactory choice can readily be made. The varieties marked with an asterisk are either quite new or of recent introduction.

Exhibition Roses, that are also Good Garden Roses.

HYBRID PERPETUALS.—*White*: Frau Karl Druschki*. *Pink*: Mrs. John Laing, Mrs. R. G. Sharman-Crawford. *Crimson*: Ulrich Brunner, Fisher Holmes, Alfred Colomb, Captain Hayward. *Rose*: Suzanne M. Rodocanachi. *Dark Crimson*: Prince Arthur, Prince C. de Rohan, Charles Lefebvre, Ben Cant*. **HYBRID TEAS.**—*White*: Kaiserin Augusta Victoria. *Pink*: La France, Caroline Testout. *Carmine Rose*: Marquise Litta. **TEAS.**—*White*: White Maman Cochet, Souvenir de S. A. Prince, *Pink*: Maman Cochet, Souvenir d'un Ami, Mrs. E. Mawley*. *Yellow*: Marie Van Houtte, Madame Hoste, Souvenir de Pierre Notting*.

Garden or Decorative Roses Only.

SUMMER FLOWERING—**PROVENCE.**—*Pink*: Common Moss. *Pink*: Common. *White*: Blanche Moreau. **DAMASK.**—*Striped*: Rosa Mundi, Austrian Briar. *Coppery Red*: Austrian Copper. *Yellow*: Austrian Yellow, Harrisoni. **HYBRID SWEET BRIARS.**—*Coppery Yellow*: Lady Penzance. *White, tipped Crimson*: Janet's Pride. *Crimson*: Jeannie Deans. **CLIMBING ROSES.**—*White*: Bennett's Seedling (Ayrshire), Félicité Perpétue (Evergreen), Rosa-moschata, Himalaica (single). *Blush*: The Garland (H. China). *Crimson*: Crimson Rambler (Cl. Polyantha). *Carmine*: Carmine Pillar (single). *Yellow*: Claire Jacquier (Cl. Polyantha).

AUTUMN FLOWERING.—**HYBRID TEAS.**—*White*, Souvenir du President Carnot, L'Innocence. *Blush*: Viscountess Folke-

GARDEN AND DECORATIVE ROSES.

Position in Present Analysis.	Average number of times shown in the four years.	No. of times shown in 1903.	Name.	Date of Introduction.	Colour.
1	10.2	12	William Allen Richardson, N.	1878	Deep orange yellow
2	8.5	5	Gustave Regis, H.T.	1890	Nankeen yellow
3	8.2	7	Marquise de Salisbury, H.T.	1890	Bright crimson
4	7.2	5	Madame Pernet-Ducher, H.T.	1891	Canary yellow
4	7.2	8	Rosa macrantha, S.	—	Flesh
6	7.0	9	Madame Chédane Guinoisseau, T.	1880	Clear bright yellow
7	6.0	5	Camoens, H.T.	1881	Glowing rose
*7	6.0	7	Leuchstern, Cl. Poly.	1899	Bright rose
*7	6.0	6	Purity, H.B.	1898	White
7	6.0	6	Turner's Crimson Rambler, Cl. Poly.	1893	Bright crimson
11	5.7	4	Reine Olga de Wurtemberg, H.T.	1881	Bright light crimson
12	5.0	3	Paul's Carmine Pillar, S.	1895	Carmine
13	4.7	6	Claire Jacquier, Cl. Poly.	1888	Nankeen yellow
14	4.5	8	Rosa Mundi, Damask.	—	Red, striped white
14	4.5	3	Souvenir de Catherine Guillot, T.	1896	Coppery carmine
16	4.0	5	Anne of Geierstein, Sweet Briar.	1894	Dark crimson
*16	4.0	4	Hélène, Cl. Poly.	1899	Pale mauve
*16	4.0	4	Leonie Lamesch, Poly.	1899	Bright coppery red
16	4.0	4	Madame Falcot, T.	1858	Deep apricot
*16	4.0	4	Madame Ravary, H.T.	1899	Orange yellow
16	4.0	3	Papillon, T.	1882	Pink and white
22	3.7	0	Bardou Job, H.T.	1887	Glowing crimson
22	3.7	4	Ma Capucine, T.	1871	Bronzy yellow
*24	3.5	3	Irish Glory, S.	1900	Silvery pink
24	3.5	7	Red Damask, Damask	—	Red
26	3.2	4	Hebe's Lip, Sweet Briar.	—	White, picotee edge
27	3.0	0	Alister Stella Gray, N.	1894	Yellow
27	3.0	3	Liberty, H.T.	1900	Velvety crimson
*27	3.0	3	Gardenia, Wich.	1899	Yellow
27	3.0	2	Paul's Single White, S.	1883	White
*27	3.0	2	Thalia, Cl. Poly.	1896	Pure white
27	3.0	3	The Garland, H.C.	—	Blush
*27	3.0	3	The Lion, Hybrid Briar.	1900	Rich crimson
34	2.7	4	Cecile Brunner, Poly.	1880	Blush
34	2.7	1	Homère, T.	1859	Rose
34	2.7	1	L'Idéal, N.	1887	Metallic red
34	2.7	2	Lady Penzance, Sweet Briar	1894	Coppery yellow
34	2.7	2	Perle d'Or, Poly.	1896	Nankeen yellow
34	2.7	2	Rosa moschata alba, S.	—	White
34	2.7	1	Rosa multiflora grandiflora, S.	1886	Pure white

* These are new varieties which according to their ages have been either given an average for two years, or are placed according to the number of times they were staged at the last exhibition alone.

stone, Madame A. Guinoisseau, Antoine Rivoire. *Pink*: Killarney*, Madame A. Chatenay, Camoens. *Rose*: Madame Jules Grolez, Grand Duc A. de Luxembourg. *Crimson*: Grüss an Teplitz, Liberty, Papa Goutier*, Bardou Job (semi-double). *Yellow*: Gustave Regis, Madame Ravary*, Madame Charles Monnier*.

TEAS.—*Blush*: Dr. Grill, G. Nabonnand. *Pink*: Madame Lambard. *Coppery red*: L'Idéal, Beauté Inconstante. *Rosy crimson*: Corallina. *Crimson*: François Dubreuil.

BOURBON.—*Blush*: Souvenir de la Malmaison. *CHINA*.—*White*: Mrs. Bosanquet. *Pink*: Common, Laurette Messimy, Madame E. Resal. *Crimson*: Fabvier. *PERPETUAL SCOTCH*.—*Blush*: Stanwell Perpetual.

POLYANTHA.—*White*: Madame A. M. de Montravel. *Flesh*: Marie Pavie. *Rose*: Gloire des Polyantha. *Crimson*: Perle des Rouges*. *Yellow*: Perle d'Or, Leonie Lamesch, Eugénie Lamesch*.

RUGOSA.—*White*: Blanc double de Coubert. *Blush*: Fimbriata. *Crimson*: Atropurpurea*.

CLIMBING.—*Crimson*: Longworth Rambler (H.T.), Reine Olga de Wurtemberg (H.T.), François Crousse* (T.). *Yellow*: Gloire de Dijon (T.), W. A. Richardson (N.), Alister Stella Gray (N.), Rêve d'Or (N.).

TRAILING ROSES (WICHURAIANA).—*White*: Wichuraiana. *Pale Yellow*: Jersey Beauty*, Alberic Barbier*. *Pink*: Dorothy Perkins*.—EDWD. MAWLEY, Berkhamsted.

East Burnham Park, Bucks.

The county of Bucks is celebrated for its many historical, interesting, and beautiful homes, and amongst them is the above, the home of Mr. and Mrs. Harry J. Veitch. It is not far removed from the world-famed forest of Burnham Beeches on the one hand, and, on the other, the equally well-known home of the Fortescues. We allude to Dropmore, horticulturally famed for its magnificent collection of coniferous and other trees, as well as by the charm and character of the gardener who planted them—Phillip Frost, now no more.

The occasion of our visit, on the 29th July, was a pleasant one namely, the holding of the Farnham Royal, East Burnham, and Hedgerley flower shows. This is a pleasant amalgamation and joint exhibition, held first in one parish and then in the other. This year Mr. Harry J. Veitch was the host and president, and it need scarcely be said that nothing was left undone that could possibly have been done towards making the show a great success and the attendance of the visitors pleasant.

We have had the privilege of visiting East Burnham Park on many occasions since the property has been acquired by Mr. Veitch, and have witnessed with pleasure the great improvements he has year by year effected in the garden; an entirely out-of-door garden, he it remarked. For several years it was an uphill battle he had to wage against conditions inimical to good gardening, namely, a light, shallow soil, resting on a bed of gravel of great depth. Added to this, the summers on the whole have been dry and hot, especially the three previous to 1902, so that successful results of extensive planting under such conditions have been most difficult of attainment, but thanks to perseverance with the water-cart, mulching, and other means taken to lessen the evils of drought, the trees were kept in healthful growth, and now, through the influence of the greater rainfall and a moister atmosphere of last year and this, the various new plantations have made remarkable progress; so much so, that thinning out must before long be attended to.

In a garden so full of various and interesting aspects as this is, representing and embodying, as it does in a great measure, the life experience of one of England's foremost horticulturists, it is difficult to say what to admire the most. Here is the long expanse of well kept and beautiful lawn extending from the house well into the park beyond, judiciously, but not overplanted with the choicest and best of hardy flowers, trees, and shrubs. The Rose garden, where Roses are planted in masses of one colour in beds, and grown on lofty pillars, and arranged in many other artistic ways. The Rhododendron garden, planted in the same way. The beautiful ornamental lake, with its margins so attractively planted, and the water furnished with many plants of the new charming hybrid coloured Water Lilies.

The new pergola, with its old-fashioned tiled floor and pillars of rough materials, already mostly covered with climbing plants and Roses in great profusion, runs parallel with the pergola. A beautiful sunk garden of Roses has been formed, where Roses of every sort and description have been planted and are allowed to grow naturally at their sweet will and pleasure. Or, again, the semi-wild woodland and the valley and bog garden. Each has charms distinct from the other, and the whole together go to make one of the most interesting, beautiful and restful of cut-of-door gardens we have recently seen.—Q.



Phalaenopsis intermedia Portei.

Though still rare, this beautiful Orchid has been known to fanciers for many years, and is sometimes shown in excellent condition. It is described in Williams' "Orchid Album" as follows:—"This beautiful plant, which is very rare, is not unlikely to be a natural hybrid, and if so we should suppose it to be a cross between *P. rosea* and *P. amabilis*; let it, however, be hybrid or species, it ranks among the very handsomest of its class. In general habit it resembles *P. grandiflora*, the leaves being broad oblong acute, about 1 foot in length, the upper side dark green, the under side dark purplish, more in the way of *P. amabilis*. The spikes are arched and branched, supporting the numerous large flowers. In one form the oblong sepals and rhomboid petals are white, suffused with light rose at the base, the lip rich dark purplish rose, with the lateral lobes bluntly wedge-shaped, rosy, the base of the front lobe tinted with orange-yellow, and the disc and callus yellow, the latter marked with deep purple spots. The flowers are of good substance, and remain in perfection a very long time."

The Week's Cultural Notes.

Masdevallia towarensis, now advancing for flower, is a most useful and beautiful species for cutting; and in order to see the flowers at their best, the plants should now be given rather more warmth than the coolest house affords. They will open more freely, and be of a purer white. Wherever the flower spikes are left on, these produce blossoms again next season, but this, of course, necessitates the wiring of the individual flowers when cut. But if the stems and all are removed there will generally be plenty more produced, as it is very free in this respect. The flowers may, if needed, be left upon the plants until they fade without injury to the latter; and as several spikes, containing each three or four flowers of the purest white, are produced on quite small plants, a dozen or two good specimens will make a very fine display.

Cypripedium Spicerianum is one of the finest flowers of the week, and it is now quite a success under cultivation. Good culture is needed, as it abhors anything decaying about its roots, though liking a sound, substantial compost of good fibry loam, sphagnum (chopped), and broken crocks. The proper time to repot is just as the flowers are past, young roots being then freely produced. While in flower, it should not be placed about in cold, dry houses, or rooms, nor should the roots be stinted for water at any time.

Among the taller growing *Cattleyas*, *C. bicolor* is one that deserves more consideration, on account of its very distinct appearance. It is easily grown, and looks grand, with the bright crimson of the lip forming a pretty contrast to the dull brownish tint on the outer segments. This will now rest for a time, as will most of the similarly-habited species; also *Laelia elegans*, *L. Boothiana*, *Cattleya crispa*, and others. The lovely *C. superba* I have noticed in flower this week. It likes more heat than any other *Cattleya*, but even it must have rest, and now is the time to rest it. Keep it dormant now and onwards; then in spring it will start strongly and well, producing strong flowering growths.

Although *Cattleya Trianae* and *C. Percivaliana* are at rest, these must not be overdried, as though no signs of life can be seen, the flowers are forming in the sheath, and any excess of dryness will weaken them. *C. Mossiae* should be finished by now, and must be kept on the dry side, well up to the light. The atmosphere of the *Cattleya* house must be kept rather drier, and whenever a few hours can be spared, cleaning operations may be carried out. The white scales so troublesome to these lovely Orchids must be searched for and destroyed, especially about the rhizomes and the sheathing base of the bulbs.—H. R. R.

Notes on Vandas.

There are few genera of Orchids more beautiful than *Vandas*, and one wonders why they are not more grown. The tall-growing varieties and species, it is true, need a good deal of room, more than some cultivators can spare them; but there are a number of almost equally beautiful small sorts. Natives principally of the mainland and islands about Malay and India, most of them require tropical treatment, though in the past no doubt many fine plants have been ruined by too much heat. As a genus, however, they cannot be collectively treated, and a few notes on the best-known species should prove useful.

The propagation of most of them is comparatively easy, as nearly all throw side breaks that may be taken off and potted separately, so soon as they commence rooting. In one instance, *V. teres*, the plant may be cut up very freely, inserting the

cuttings in pots, or in a sphagnum bed over warmth, while the tops of nearly all the tall growers may be taken off occasionally and rooted. The parent plant soon breaks into fresh growth. All like plenty of sunlight, though, of course, blinds have to be used to break the full force of its rays in summer.—H.

Single-handed.

"Where is So-and-So now?" "I hardly know, but I fancy he is in a single-handed place somewhere."

More than once I have heard the above question asked and answer given in gardening circles, and from the very tone of the reply you may gather that it refers to a horticultural failure, whole or partial. Fallen to a single-handed place! This has been the lot of many a man who has belonged to what I might call the upper circle of head gardeners who control pretentious establishments. They drop out of the ranks, so to speak, through some cause or other, for which they may or may not be responsible, and in their changed position, down on one of the lower staves of the ladder, their former friends speak of them, generally kindly and sympathetically, but only as single-handed gardeners. It is the way of the world; some go up, others come down, just as they always did in this rough-and-tumble world of ours.

Ah! there are many little tragedies on the gardening stage. More than one good man has pushed his way to the front, perhaps beginning his career of responsibility as head of a single-handed establishment, and then worked upwards till he obtained control of what is known as a good place. But some men are not equal to success, and lose their balance when they reach a high position. Illustrations which prove this are common enough in the gardening world, and most of us are acquainted with men who did not know when they were well off, but grew too big or acted in some other foolish way until the end came and they found themselves "out of place." Some are fortunate enough to meet with other appointments, but not all, and, with reputations partly gone, they slide and slide till the single-handed haven opens its doors for their reception.

But the single-handed gardener who has fallen from a higher place may also claim our sympathy, for perhaps he is the victim of circumstances. The destiny of a gardener often hangs by slender threads, for he plays his part in the world of luxury. He may go on for years in peace and comfort, becoming wedded to his own particular sphere in life till he is really unsuited for any other, and then something happens. A death in the family he serves, a change of ownership, or some stroke of financial misfortune may make all the difference to him, and, without being actually to blame, he finds himself amongst the ranks of the single-handed.

But there is a good deal of bounce about some gardeners. They go up and then come down, but the bump on to the single-handed place is not sufficient to hold them there, and after a spell, during which they perhaps learn useful lessons, they bounce up again, and we find them once more in the ranks of their former friends. The society of gardeners is not unlike the rest of the world. The fraternity is a broad one, and the word "gardener" is comprehensive; but in a social sense there are lines of division. Go to a big show, or a gathering of horticulturists, and you will see it. There the heads of tip-top establishments hob-nob together quite naturally, and have very little in common with the pair of single-handed friends who are enjoying the rare luxury of a "day off," and are taking just as much interest in the proceedings. I do not mean to say that the "big heads" are in any way snobbish, because these lines of distinction come quite natural in all occupations comprised of various degrees.

To get an idea of what our young gardener in the bothy thinks of single-handed prospects, you should watch him scan the advertisement columns of his horticultural journal at the time when he wants to make a move, and note his air of disgust when he comes to the paragraph (there are a good many of this kind) which states that a gardener, single-handed, is wanted, who will be expected to fulfil sundry other duties which come outside the range of horticulture. The young man has arrived at a critical period of his life. He has jogged through the years of probationship pleasantly enough, and has followed the orthodox routine of moving from place to place to gain his experience, with the vision of a good appointment before him all along; but when the time comes he finds that these are not so numerous as he fancied. What had he better do—put his pride in his pocket and seize the single-handed chance that offers itself, with a determination to make it a stepping-stone to something better, or wait for an appointment that is more to his liking? Some would advise him one way, and some would advise him another; but he has to decide for himself, and I would suggest that he might be something worse than a single-handed gardener, so long as he does his duty in that capacity.

There is always one fine thing about starting at the bottom of the ladder. There is no danger of falling far to begin with, and there is plenty of room higher up. Many good gardeners of to-day have looked at the matter in this light, and from the

single-handed stage they have climbed on till they attained their present positions.

And what part does the single-handed man play in the world of gardening? It is a large and important one, and in extent the greatest, for whereas the plums of the occupation are comparatively few and widely known, establishments requiring the services of one gardener, with occasional help from the man who attends to the pony, or the boy who cleans the knives and shoes, are as common as the proverbial mushroom. And the single-handed gardener—that is to say, if he is worthy of the name—is a man of parts. There is nothing of the specialist about him, but he is an all-round man with a capacity for apportioning out his time so as to make the most of his days. As a rule he finds himself with rather more than he can do, and between his bit of glass, the kitchen garden, and the pleasure ground, his resources are frequently taxed to the utmost. If he has a worrying master or a fussy mistress, he has my sympathy, but if comfortable in this respect he generally finds ways and means of keeping abreast of his work. For the sake of his reputation as a gardener the little glass houses must be kept tidy and the conservatory cheerful. The household demand allows for no neglect in the kitchen garden, and for appearance sake the limited pleasure ground must not be overlooked. And in addition to everyday duties, our single-handed gardener is often an exhibitor in a small way. Being a professional, he has some standing in the immediate neighbourhood, and at many local shows plants, fruits, and vegetables are frequently exhibited that do great credit to the single-handed practitioners who grow them.

The single-handed man has few chances of showing his handiwork to the outside world, because his "little place" is rarely open to inspection. Pretentious establishments are visited by important persons, and the gardener's reputation is spread about in this way. Large gardens are illustrated and described in the



Phalaenopsis intermedia Portei.

horticultural journals, but the charge of our single-handed friend remains in obscurity. In spite of this, good work is done in small gardens, and many excellent practitioners are to be found amongst the ranks of the single-handed.—H. G.

NOTES & NOTICES

Cocoa Trees in Fruit.

Writing from Norfolk House, Beulah Hill, Upper Norwood, S.E., Mr. James Epps, jun., informs us that at the present time he has Cocoa trees in fruit and blossom in his garden.

Mr. P. Barr to Visit Egypt.

At the annual dinner of the United Horticultural Benefit and Provident Society on Tuesday evening, Mr. Peter Barr, V.M.H., occupied the chair, and, in the course of an address, intimated that he hoped to visit all the leading gardens in England, and, further, that if he has health and strength, he will journey to Khartoum and the Cataracts of the Nile, visiting also Jerusalem and other cities.

Symons Gold Medal in Meteorology.

The Council of the Royal Meteorological Society have designated Hofrath Dr. Julius Hann, of Vienna, as the recipient of the Symons Gold Medal, in recognition of the valuable work he has done in connection with meteorological science. This medal, which is awarded biennially, was founded in memory of the late Mr. G. J. Symons, F.R.S., the distinguished meteorologist and originator of the British Rainfall Organisation. The Medal will be presented at the annual meeting of the Society, on January 20, 1904.

Mr. S. B. Dicks.

Mr. S. B. Dicks, representing Cooper, Taber and Co., of London, sailed from New York over a week ago. Mr. Dicks' experience in the United States on this last trip has not been one of the most enjoyable, he having been taken down with appendicitis shortly after his arrival in New York, last August, and whilst en route to Boston, in which latter city a successful operation was performed. The great respect in which Mr. Dicks is held by the seed trade of America was amply testified to during his enforced idleness, and he speaks feelingly of the good-will shown toward him by all, and most particularly of the unremitting care and kindness of Mr. Archibald Smith, of Joseph Breck and Sons, Inc., Boston, who daily visited him while in the hospital and attended to his personal and business matters. Mr. Dicks, at home, will take a well-earned rest for a month, by which time we hope he will be fully restored to health and strength. That he may be spared to visit America again and oftentimes is the spontaneous expression of the Trade of which he is so valued a member.

National Chrysanthemum Society.

A meeting of the Executive Committee took place at Carr's Restaurant, Strand, on October 26, Mr. Thomas Bevan presiding over a good attendance. After reading the minutes of the last meeting and some correspondence, an interim financial statement was submitted showing a balance at the bank of £129 15s. 11d. Mr. C. Harman Payne announced the publication of the new official catalogue, and said it was in brisk demand; also that a deputation from the Society would visit the Chrysanthemum Exhibition at Lille early next month, and set forth the arrangements made for the visit; he also stated that the National Chrysanthemum Society of France had issued a chart, with illustrations, dealing with the diseases and insect pests which affect the Chrysanthemum, which he thought to be of a valuable character; and he proposed that it be mounted and exhibited at the Crystal Palace Show, which was agreed to. Stewards were appointed for the show on the 10th inst. It was announced that the Floral Committee would meet at 1.0 p.m., the Classification Committee at 1.30, and that the Arbitration Committee meet later in the day to deal with any protests. Mr. Payne produced the Diploma granted by the French National Chrysanthemum Society, two years ago, for an exhibit of blooms sent over by the N.C.S., and it was resolved that that, with medals received at various times from abroad, be exhibited at the Crystal Palace. A number of new members were elected, and the meeting closed with a vote of thanks to the chairman.

Postal Package Lost in Transit.

We have received from the London postal authorities part of a wrapper addressed to the Editor of this paper and bearing a 2d. stamp, indistinctly marked "Well—," but the contents are missing. Does any contributor recognise this as part of a despatch?

Women's School of Gardening, Midlothian.

The Misses Barker and Morison recently removed their School of Gardening from Musselburgh, Midlothian, to Corstorphine, in the same county, and this was formally opened on Friday last by the Countess of Aberdeen. At present there are five resident students, and a number journey out from Edinburgh, which is within a two miles' drive. We visited the garden in August, and will shortly have further references about it.

Help for the Gardeners' Royal Benevolent Institution.

As is his yearly custom, Mr. A. J. Brown, Jessamine Cottage, Chertsey, and superintendent of the garden at the School of Handicrafts there, has arranged a concert for November 12, to be held in the Constitutional Hall, Chertsey. As a rule, this is supported both by Mr. Harry J. Veitch and Mr. G. J. Ingram, officials of the Institution, which benefits to the extent of the surplus of takings over expenses, in connection with the event. The local residents of note also take a keen interest in the matter. From the programme sent, we are sure that a most enjoyable and profitable evening will be recorded, and any well-wisher of the Institution can either secure tickets from Mr. Brown, or, if they feel disposed, can send a cheque to help cover the expenses.

The Recent Gardeners' Dinner.

At a meeting of the Committee (which so successfully conducted the festival), held on Tuesday last, a balance-sheet was presented, showing that the total income from sale of tickets was £121 15s. The expenditure was £109 10s. 1d., leaving in the hands of the treasurer a balance of £12 4s. 11d. This time it was agreed it should be given to the gardening charities as follows: eight guineas to the Gardeners' Benevolent Samaritan fund and £4 to the Orphan Fund, the deficiency being made up by the Committee. The whole of the work was done voluntarily, not a penny being paid to any member of the Committee or officials for services rendered. Very cordial votes of thanks were given to Viscount Duncannon for presiding at the dinner, to Leopold de Rothschild for splendid liberality, to Messrs. Jas. Veitch and Sons for their beautiful table decorations, to the Horticultural Club for Committee accommodation, to the gardening Press, and to the officials. The dinner photograph is a most interesting memento.

Testimonial to Mr. W. B. Latham.

A complimentary dinner and an address were given on October 22 to Mr. Latham, on the occasion of his resignation of the directorship of the Botanical Gardens, Edgbaston, Birmingham. Mr. Owen Thomas, late gardener in chief to the King, occupied the chair, and there were about sixty friends present. At the close of the excellent dinner, held at the Collanade Hotel, Councillor Ernest Martineau presented Mr. Latham with the beautifully illuminated address and a purse of gold, wishing his respected friend of many years' standing the enjoyment of health and happiness for long years to come. Mr. Latham thanked Mr. Martineau and the donors for their kind recognition of his services, and expressed a hope that for many years to come he might be spared to still enjoy their friendship and horticultural associations. On behalf of the Midland Carnation Society, Mr. H. Paton, presented Mr. Latham with a large framed photograph of some of the members, exhibitors, and judges of the Society's exhibition, held in the Botanical Gardens on August last. The picture was nicely framed, and Mr. Latham is represented in the group. Professor W. Hillhouse adverted to his thirty years' connection with Mr. Latham as honorary secretary of the Botanical Gardens, Edgbaston, and trusted that for many years to come he might be spared to enjoy his well-merited rest, at Rowington, near Warwick. Other toasts followed, and the evening's proceedings were enhanced by an excellent musical programme. Letters of apology for absence, and congratulations from friends, including one from Mr. Pettigrew, superintendent of the Public Park, Boston, U.S.A., one of the earliest pupils under Mr. Latham at Edgbaston, were read.

Amateur Rosarians.

The Very Rev. the Dean of Rochester, D.D., V.M.H.

The venerated Dean of Rochester is one of England's truly noble men. Towering above his fellows, both in mind and body, his part in life has been, and still remains, one of continued exertion on behalf of his fellow citizens. Wise, genial and full of wit, the Dean's presence at any horticultural celebration (for we must allude to his actions in our own sphere) marks it at once as of interest, and each occasion, too, re-emphasises his earnest sympathy with gardeners and his enthusiasm for gardening. He has been a very tower of strength to the National Rose Society, of which he is the President, and by his single influence, when the Rose shows could no longer be held at the Crystal Palace, he secured the site of the Temple Garden—that excellently situated private garden of the Benchers of the Inner Temple.

Dean Hole cultivates Roses by thousands, though, of course, he does not now exhibit them. He has written about them, however, in his pleasant "Book About Roses, How to Grow and Show Them," and the collection selected by him and given therein, forms "the Dean's collection," which Messrs. Ben. Cant and Sons (and possibly other firms) grow and offer as such. This "Book About Roses" was first published in 1869, the author's name being simply given as S. Reynolds Hole. It now has run to its 15th edition, and is widely read and known outside rosarian circles.

Besides this little work on Roses, the venerable Dean published "A Book About the Garden and Gardeners" and "Our Gardens," the latter in 1899, as well as nine or ten other prominent books on subjects more or less removed from that before us.

Born at Cauntton Manor in 1819, S. Reynolds Hole fell enamoured with Queen Rose on the threshold of manhood, and, indeed, it is over forty years since he, as founder of the National Rose Society, inaugurated its first show. The Dean presided at the Rose Conference, held by the Royal Horticultural Society in 1889, and last year, at Holland House, he was again found in the presidential chair.

Rev. C. H. Bulmer.

The nom de plume "Herefordshire Incumbent," is one of the most familiar in the pages of the *Journal of Horticulture*, and we daresay that those querists who are not infrequently found signing themselves as a "Forty Years' Reader," can remember notes from the pen of our respected correspondent all that time; and we are sure that the writing of the letters has been as pleasurable to Mr. Bulmer as to our readers.

Mr. Bulmer lives and labours at Credenhill in Herefordshire, where a son (or sons) is prominent in the cider and perry industries. A keen love for Roses has always been a notable trait in his character, and it will be seen that he, though so far removed from London, has never been prevented by that circumstance from being a friend to, and moving spirit in, the National Society of rosarians. He was one of that notable group which included Dean Hole, Robert Baker, and William Paul, who founded the N.R.S. forty years ago, when he exhibited at its shows; and again he rejoiced to be in a position to propose its resuscitation in 1876 at a large and representative meeting of the Horticultural Club. Together with Mr. George Paul as temporary honorary secretary, Mr. Bulmer had kept the idea alive.

Long before 1864, however, our veteran correspondent had founded the West of England Rose Society, which is "the veritable parent of all existing Rose societies," as he on one occasion wrote.

In other fields also, of horticultural enterprise, Mr. Bulmer can fairly claim a place. At the introduction of that standard work, "The Herefordshire Pomona," (1878), two papers from his pen were included on "The Orchard and its Products"; about which, as a guarantee of their accuracy and scientific value, it is only necessary to add that the editor was the late Dr. Hogg, the pomologist of the age. To furnish materials for this work during its publication in parts, there was commenced and continued down to the present day, an exhibition of Apples and Pears, with such marked success as to become now in extent and excellence an annual fruit exhibition second to none in the kingdom.

Rev. A. Foster-Melliar.

In a sense, the Rector of Sproughton requires no introduction to the gardening brotherhood of every parish in the land, who name the "Journal" as their favourite paper, for he has "railed 'em" from his retreat for many years. But we are favoured now in presenting his portrait and a few personal notes.

Mr. Foster-Melliar has been interested from boyhood in Roses, and his work amongst them will extend back nigh forty years. It was not till 1879, however, that he entered the exhibitors' lists, and whatever his earlier successes may have amounted to, he has not said, but in later times—1893, for example—we know that he won the Tea and Noisette challenge trophy, and about the same period he gained the medal for the best Tea or Noisette at five successive shows of the National Rose Society. The varieties, we find, were Souvenir d'Elise (twice), Madame Cusin, Maréchal Niel, and La Boule d'Or. For the last year or two circumstances have prevented his attending the National Rose Society's shows or meetings; but he still exhibits locally, and is not often beaten in East Anglia, except by Mr. O. G. Orpen, of Colchester. During the present year the veteran rosarian not only won the cup for amateurs at Diss, in Norfolk, but also was first, defeating Messrs. Frank Cant and Co. in both the open classes.

The Rev. Foster-Melliar is a genuine amateur, and with the excep-

tion of some help in manuring, digging and planting attends to all the requirements of his Roses with his own hands. But not only is he a Rose grower of the keenest pattern, he is specially fond of Water Lilies, Violets and—autumnal Strawberries! On another page of this issue we illustrate his achievements with "the king of small fruits," and his own pen has discussed the idiosyncrasies of the Violets he has tried, and the ins and outs of their cultural needs.

The Water Lilies this year, alas! went to form caddis worms—those peculiar aquatic grubs that encase themselves in grains of sand or shell, wood, straw or leaves—which ate the young growths in their earliest formation; and discovery was not made till the Lilies' season was far spent. Of the long beds of Roses out on the lawn before the quiet old Rectory, and of the hundreds of budded Briars—the buds already, in late September, grown up six inches on some of the trees—of these we may not write here, but must rest content with the simple reference.

As author of "The Book of the Rose" (Macmillan), which was published in 1894, and a second thoroughly revised edition in 1902, Mr. Foster-Melliar's name will long be kept in remembrance, for it is the best handbook the Rose exhibitor has before him.

Mr. Conway Jones.

Mr. Conway Jones, of Blenheim House, Hucclecote, Gloucester, is one of the best known amateur rosarians in the West, and exhibits, perhaps, more frequently in London and at the National Rose Society's provincial shows than any other amateur from Gloucester or the neighbouring counties. He went to Glasgow this year with nine exhibits and was rewarded by eight successes, including the silver medal for the best Hybrid Tea, and was a close second for the trophy. At Gloucester, Mr. Conway Jones stood first for the twenty-four varieties, besides securing other testimonies to his skill both here and at Hereford, Bath, and Reading.

As a member of the National Rose Society he watches its interests in his own sphere of influence, and doubtless he will be called upon to "beat the drum" at the (proposed) visit of the National Rose Society to Gloucester next year. We believe that the provincial show will be held there in 1904. And naturally, at the founding of the Gloucestershire Rose Society fifteen years ago, Mr. Conway Jones was a leader, and has always been a prominent member of that body.

We have had the pleasure of meeting this lover of Roses at the annual general gatherings of rosarians at Westminster, from which his genial personality would be missed, and we know from experience that he has been the means of encouraging many of his friends to become cultivators of flowers and devotees of gardening. He is always willing to render assistance to beginners. In a letter to us he once observed:—"I am a very busy man, and my rosery is my great hobby and pleasure. My favourite Roses are the Teas, though I must acknowledge the Hybrid Teas are very beautiful and delightful to grow. I know of no better recreation for a business man than Rose growing, and I am pleased to say I have induced many of my friends and neighbours to take up the hobby, very much to their delight and advantage."

Mr. Edward Mawley.

As honorary secretary to the National Rose Society, Mr. Mawley has the success or non-success of that body largely in his hands. Since the late honorary secretary (Rev. H. H. Dombrain) retired owing to the infirmities of age, Mr. Mawley has proved that he is determined to do everything possible for the maintenance of its progress, though naturally he had the brunt of the work upon him during the later years of his co-ordination in the secretariat. When he first became attached to the National Rose Society he was living at Croydon in Surrey, where he never grew more than 400 plants (Roses); but so successful was he at the exhibitions, that he was called the "Champion of the Light Weights." With the exception of the year 1894, we believe Mr. Mawley has exhibited at every show of the N.R.S. as well as at its provincial centres from year to year.

In 1888 the rosarian left Croydon for Rosebank, Berkhamsted, Hertfordshire, and on the rather cold clay there, he cultivates both Roses and Dahlias, these being specialised. In the year 1894 Mr. Mawley ventured to Hitchin, and his judgment served him well in this contest with the champion grower, Mr. E. B. Lindsell, from whom he won the honours of the day. Truly, 'twas bearding the lion in his den. But the Berkhamsted Roses had excelled previously, we mean specially, for in 1888 Mr. Mawley secured the medal for the best H.P., and in 1892 for the leading Tea. He exhibits at a number of the noted shows in the Home Counties with distinction.

It is hardly necessary to say that Mr. Mawley is the compiler of this journal's Rose and Dahlia analyses, both of which are models of careful preparation, and invaluable as records. For many years he also contributed the section in the "Rosarians' Year Book," entitled "The Weather of the Rose Year," and we believe that at Berkhamsted he has the most carefully equipped private meteorological observatory in the country. He is secretary to the Royal Meteorological Society, with a seat on the Council; and besides other writings, he annually prepares the Phenological Record for that Society, and this "Record" takes account of the dates of the coming and going of migratory birds, the opening of certain well-known flowers, the falling of leaves, &c.—in short, the natural phenomena of Nature. Mr. Mawley, therefore, is one of the most useful citizens of the Motherland, doing good work in a very quiet way, and he is well assisted and encouraged by his wife.



Mr. Conway Jones.

Mr. Herbert E. Molyneux.

Prefatory we may remark that Mr. Herbert E. Molyneux, of the world of Roses, has no family relationship to the other Mr. Molyneux, famed mostly in connection with the Chrysanthemum, the floral queen of the autumn and winter. He is one of the younger generation of amateur rosarians, in the front rank as an exhibitor, and though his garden at Balham is well within the six miles area of Charing Cross, where the smokiness may be said to constitute a grievance, he is yet successful wherever his flowers go. This year he did well at Sutton in Surrey, and at Harrow, as elsewhere; while the year before, though he only put three boxes in competition, owing to family bereavement, he nevertheless won two first prizes and one second, as well as two silver medals—surely not a bad day's work.

It may be mentioned that Mr. Molyneux read a paper before the Horticultural Club in December last year on "Rose-Growing Near Large Towns," which was so much appreciated that it has since been published in pamphlet form, after having been incorporated in vol. xxvii., part 4, of the Royal Horticultural Society's Journal. That paper has the right spirit, the true rosarian's love for his flowers, running along its lines, and we hope its message may have searched the hearts of even a few suburban residents whose inclinations are horticultural, and only require encouragement. "What man has done, man may do."

Mr. Molyneux is one of the joint auditors of the National Rose Society and also a member of the committee. He has done good work as honorary local secretary, and is well known as a judge at the Temple Rose Show and at others near London. His pen, too, finds occasional employment in describing "Roses" through the gardening Press.

Rev. F. Page-Roberts.

Mr. F. Page-Roberts began Rose growing at Scole Rectory, Norfolk, in 1876 in the poorest of sandy soils sloping to the south. He exhibited for the first time in 1881 in that excellent class for those who have never won a prize at the National Rose Society's shows, and won one of the prizes. From that year, although the severe winters of 1891-92-93 killed more than 2,000 Teas, and he again lost a great many in the winter of '95—he exhibited successfully, nevertheless, in the principal classes for Teas, being first four times in five years—the years when the principal class for Teas was raised from twelve to eighteen. He moved this year (1903) from Halstead, Kent, where his Roses were beginning to do well, to Strathfieldsaye Rectory in Hampshire. This time he has a real Rose soil to deal with. He showed only once this year—at the Reading Rose Show—winning three first prizes, one second, and the prize for the best Rose, with flowers cut from the trees that were moved in March. The Rev.

Page-Roberts attends to the trees entirely himself, and if he could win prizes with Roses on a poor sandy soil in Norfolk, where will he stand now, when he has "a real Rose soil?" There will be increased zest in the shows wherever the Strathfieldsaye Roses meet those from the east, the north or the metropolitan area. Mr. Page-Roberts takes a warm interest in the National Rose Society, and is a faithful attender of its meetings.

Rev. J. H. Pemberton.

Mr. Pemberton is a gentleman of great energy, and what time he can afford from his clerical duties in a poor and thickly populated district, he devotes to Rose culture. He was one of the earliest to revive a taste for the "garden" Roses, for at a National Rose Society's show, held at South Kensington, he staged twelve varieties of old-fashioned Roses in boxes, labelling them "Grandmothers' Roses," giving delight to hosts of the visitors, who would be sure to remember an exhibit of this nature. These old Roses were a few found by Mr. Pemberton in his own garden, which, by the way, was his father's and grandfather's before him.

Living at Romford, a little to the east of London, it might be thought that he had difficulty in staging first-rate blossoms, but he does it. Moreover, the work is all done by himself and his equally devoted sister, except some of the digging and hoeing, and truly 4,000 Rose bushes require much loving care. The enthusiastic cleric, however, knows his plants by heart, and is never in a quandary when blooms are to be selected.

And Mr. Pemberton is an out-and-out exhibitor; he has staged at a show on June 18 (1896), and continued all the while to August 4, exhibiting forty-nine times and winning forty-eight prizes, including two challenge trophies, and two cups and medals. If that is not a record, we want to hear where the record lies! He has been amongst Roses from childhood. His father taught him to bud, prune, graft, &c., while he was still a

lad, and so far back as 1874 he won his first premier award. Exhibiting at the inaugural show of the National Rose Society in St. James' Hall in a class for twelve distinct varieties, he came second out of forty competitors, and has never been absent from one exhibition of the "National."

Amongst other successes, Mr. Pemberton has been first three times in the amateurs' trophy class; been second six times, and thrice third, but never out of it altogether. The Jubilee trophy has also fallen to him four times. As a judge of Roses he is always in request, for he knows varieties exceptionally well. He always forms one of the adjudicators in the nurserymen's great class for seventy-two distinct varieties, which honour could only be accorded to very, very few. Mr. Pemberton writes a good deal to the gardening papers, and is now the leading spirit in a movement to get the National Rose Society to establish two-days Rose shows. As a vice-president of that body he takes the keenest interest in its working.



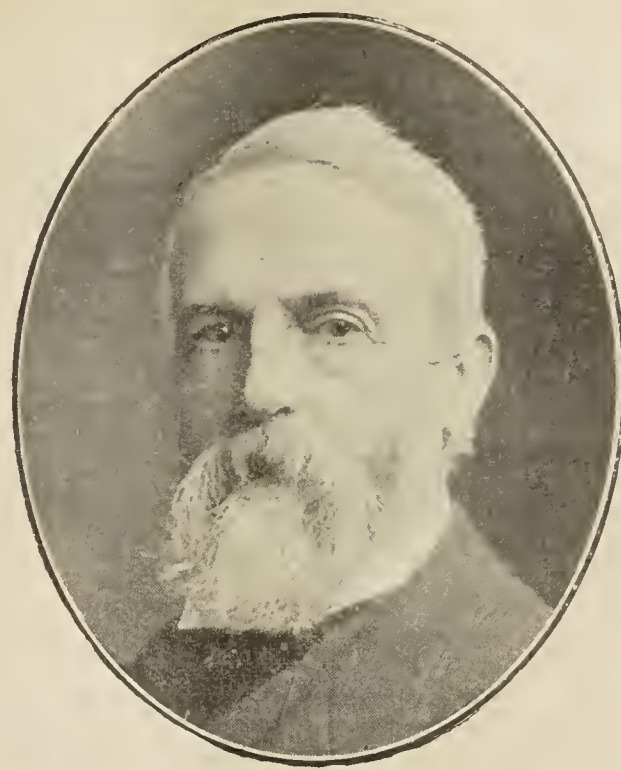
Mr. H. Molyneux.



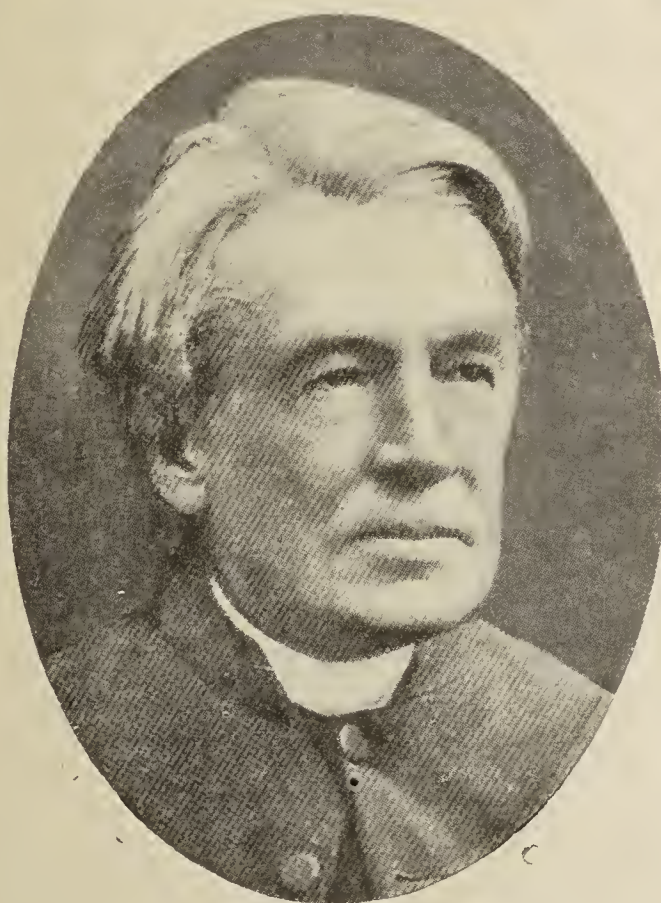
Rev. F. Page-Roberts.



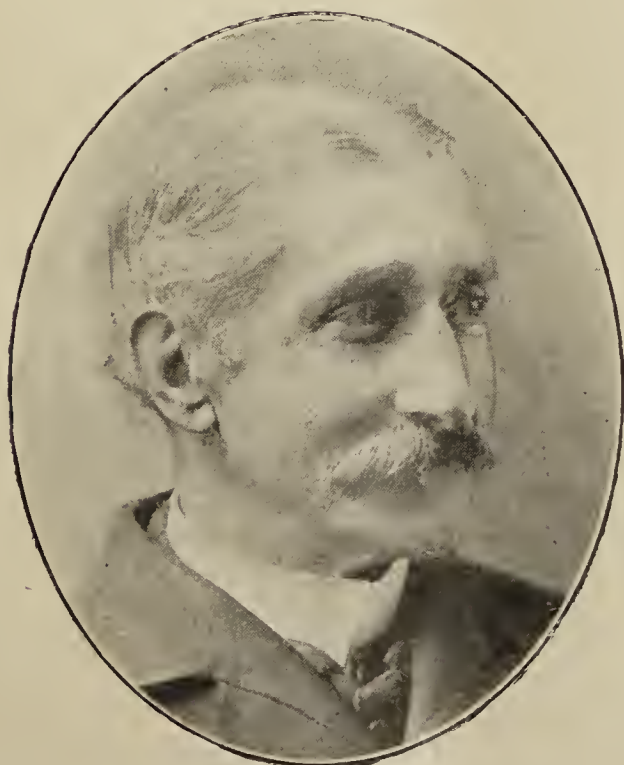
Rev. A. Foster-Melliar.



Mr. Edward Mawley.



The Very Rev. the Dean of Rochester.



Rev. C. H. Bulmer.



Rev. J. H. Pemberton.



Roses in America.

As I never was in America, it seems likely that "A. W." (page 349) knows more about Rose culture there than I do. I simply relied upon the information sent me, by pamphlets, papers, and letters. The pamphlet related to the growing of Roses in Oregon, a Western State, and the author certainly gives one to understand that most of his plants are budded, either on Manetti or the Briar. He admits that some prefer them on their own roots; but, like everyone who has had sufficient experience, finds it only answers for certain varieties. I am much surprised to hear that American nurserymen can grow their indoor blooms for sale on cuttings which are afterwards thrown away. I thought they were budded, or more probably grafted, on Manetti.—W. R. RAILLEN.

Wire Net for Peas and Strawberries.

In looking over a collection of papers for the purpose of reducing their number, I came across a paragraph on this subject in a *Journal of Horticulture* twenty-eight years old, which is worth reprinting.

"WIRE NET FOR PEAS AND STRAWBERRIES."

"To obtain Pea sticks in most of the localities of the three islands is no joke; therefore this year I ordered a quantity of 10-yard lengths of wire netting, 2 feet wide and 3-inch meshes; these I use for Peas and Strawberries. For the latter a 2-foot breadth put over in spring like an arch enables them to rise while in bloom through the meshes, and when they are ripe they are cut off the clay, clean for the mouth, beautiful to the eyesight, and ornamental; and for Peas I certainly prefer the half-hoop or arch also with them. For a 10-yard length of netting twelve pins of wood are required, 1½ inch square and 12 inches long, pointed at one end, six pieces of galvanised wire 1 yard long, with four staples of the same material; fix one of these upon two pins, leaving 2 feet clear to form your arch for the wire, drive your pins into the ground upon each side of your Peas (say 6 or 8 inches), form your arch neatly, and fix your wire over these, and use Carter's Early Gem Pea, and if your land is what it ought to be you will have a return of, may be, a hundredfold. These with me this year are fully 2 feet high, beating all the others in a canter for quantity and quality. If taller kinds are grown your arch of wire must be regulated thereto. The kinds I have this year are Ringleader, Laxton's Alpha, McLean's Little Gem, Dwarf Green Mammoth, Fillbasket, and McLean's Best of All. Each and all of them are fine crops. The Strawberries are Keen's Seedling, President, and Elton Pine. I trust this may be useful to all gardeners, but more so to such as I am. My early Peas are finished, and the gleanings saved for seed next year. Since writing the foregoing I have drawn from a line (sown in April with 12ozs of Hairs' Mammoth), the produce of two Peas which I sowed, and counting the 10 yards I find there are twenty or more plants on the yard, say 200 equal to those sent you, as every plant will give the half of these two—viz., over forty pods each. All wrinkled Peas should be sprung, picked, and planted. My experience for myself and others exceeds half a century, and I am now—OLD SECTY. JACK, *Jedburgh, N.B.*"

I have for many years used wire netting instead of sticks for Peas, though not in the way described in the foregoing paragraph. But for Strawberries I have never used it, and think the idea an excellent one. Possibly it escaped my notice at the time of publication, but there is another possible reason for not trying it at the time. There was, on the Longleat estate, a steam engine for all sorts of purposes, including chaff-cutting. For protecting Strawberries I used straw, cut 1½ or 2 inches in length, and found very few slug-eaten fruits; for slugs do not like a shifting carpet. I am not now in a position to grow Strawberries, but commend the wire netting to those who are. For Peas that are sown in single drills, the plan I adopt to support them is to drive stakes about 4 feet apart along the centre of the row at the time of sowing, and fix the wire netting singly and upright to these stakes, keeping it three inches away from the soil. It will be found that as soon as a tendril is formed it will eagerly catch hold of the netting, and in the course of a day or two you will have a difficulty in pulling it away without breaking. In case of a plant failing to catch hold (which but rarely happens), I have a few pieces of wire bent S-fashion close

at hand, just to give it a hitch up, and it soon takes care of itself.

In another part of the Journal enclosed you will see I was one of the pioneers in bringing back to cultivation the long-neglected perennials.—WILLIAM TAYLOR, Bath.

[In the old copy sent by Mr. Taylor (dated August 19, 1875) an article by him entitled "Gems of the Herbaceous Border," is furnished as leader.—ED.]

Potato, The Factor.

In contrast to the "phenomenal" yield of Sir John Llewelyn Potato recorded in your issue of October 8, page 335, may I cite the following?—Mr. Edward Leeson, Top Common, Hucknall Torkard, planted in spring, under ordinary conditions, 11b of Dobbie's new Potato, "The Factor," and has just lifted 61lbs of saleable tubers. It will, therefore, be allowed that this variety holds its own as a most productive sort. It is also a good disease resister, keeps well, and cooks beautifully.—JOHN A. SIMPSON.

Autumn Pruning of Fruit Trees.

I have found it an excellent plan, especially when dealing with trees that have for various reasons become crowded, if time permits, to take in hand at once the work of thinning the growths. Before the foliage is down there is less difficulty in discerning which branches will be best removed and which allowed to remain. I am convinced that far too many pyramids and bush trees in our gardens carry too great a number of branches. The centres are thus rendered thick and impervious to sun and air, and the fruit, when there is any upon the sunless side of the trees, is too frequently devoid of colour, and also to a greater or less degree lacks flavour. I saw some pyramid Pears in spring, whose exterior was practically as dense as a wall, and this, when growth was just beginning. How such trees can be expected to produce satisfactory crops is a mystery.—J. W.

The Colouring of Apples.

I have to thank your correspondents for the kindly notice they have given to the questions asked under this head. "W.R. Raillem" tells us, on page 380, that cold "snaps" help very much to increase the colour of fruit. Over and over again I have had the same phenomenon cited; and, indeed, no one can deny that sharp "snaps" cause a quick transformation to bright colours. "W. S." furnishes an array of factors; and his remarks are good. When I wrote, however, I had in my mind pot-trees (these particularly) that are cultivated in every respect as they ought to be, and growing side by side for years; and asked Which has the greater influence (on such trees) the sun, or wind and rain? Root-pruning, therefore, is outside the strict limits of the argument. Nor can soil be considered, seeing that comparisons were made not with every factor that would tend to give colour, but only with sun versus rain and wind. Given orchard, or pot fruit trees, granting proper culture, what then? Is a sunny year more beneficial than a year of dull skies, wind and rain? The Editor notes that Bunyard's pot-trees were "finished in the open-air, and not under glass"; and if the fruits were uncoloured when taken out of doors, how magnificently they had coloured in this boisterous, rainy season!

I was quite averse to the wind and rain asseveration when visiting the nurseries referred to, and it was my remark that the fruits on pot-trees were remarkably well coloured that brought out the reference to the wind and rain. I was astenished, and on my making observation got the reply already quoted (page 359).—LAMASOOL.

This is a most interesting point, and as discussion is invited I willingly advance a few remarks. The main question which "Lamasool" asks is, "Are the influences of wind and rain greater in their effect on colouring fruits than sunshine?" This pertinent question is apparently asked because a firm of fruit growers have recently informed "Lamasool" that they would rather be without the sun than the wind and rain. That idea will doubtless come as a surprise to the majority of "Journal" readers, and I am inclined to think that the firm in question conveyed only an incomplete idea of the thoughts they intended to express. Without sunshine the fruit grower can do nothing; and yet all close observers know that both wind and rain do much towards hastening the colouring process in fruits—under certain conditions. It is simply a question of the proportionate distribution of food, light, warmth, air, and moisture. It is quite possible to have too much sunshine when other essential conditions are absent, and it is undoubtedly possible to have too little sunshine and too much wind and rain.

In order to have a clear conception of how various conditions may effect the colouring process, it is necessary to remember the following facts: The soil must be sufficiently rich to supply

the tree with all the necessary foods obtained from the soil; there must be sufficient moisture to dissolve those foods; sunlight is needed to allow the leaves to elaborate food from the air; a free circulation of air in the soil and throughout the branches is necessary to secure healthy growth, well ripened wood, and active leaves; and in the case of Apples the fruits must be fully exposed to light, or they will not colour perfectly—that is, they will not assume their *brightest* tints, although they will change their colour after being gathered.

Every experienced cultivator knows that when trees carrying heavy crops are fed with suitable manures the fruits colour better, as a rule, than when no feeding is practised, and that it is quite possible to gain size at the expense of colour by feeding too liberally with nitrogenous manures, although a certain amount of nitrogen is necessary to secure high colour. The above facts—which are, I believe, generally recognised—should lead one to arrive at the conclusion that the best coloured fruits are obtained during seasons when sunshine and rain are balanced in suitable proportions for crops generally, and when there is plenty of sunshine and a *moving atmosphere* at colouring time. This is really borne out in practice, for during very hot, dry summers many fruits do not colour so well as during cooler ones, simply because the food in the soil—through lack of moisture—does not dissolve quickly enough to supply the trees' needs. During a season which is hot and dry up till the middle or end of September, with copious rains after that time, I have frequently noticed that, notwithstanding the sunshine, Apples are somewhat lacking in colour till the rains come, and then take on a brilliant hue rapidly. Comparatively cold nights are also undoubtedly conducive to high colour.

Now I come to the real point: Do wind and rain exercise a more beneficial effect on the colouring of fruits than either sun or cold nights? If so, why? My opinion is that they do, at a certain stage, but that they would not do so in the absence of sunshine over a long period; and what I consider ideal conditions for colouring Apples are the following: A soil moist from recent rains; bright sunshine for several hours daily; a breezy and constantly moving atmosphere, as distinguished from a very strong wind; and, lastly, cold nights. My reasons for the opinion expressed above are these: Sunlight is needed to create the energy by the leaves to retain and elaborate carbon [carbohydrates]; in windy weather there is a more rapid circulation of air around the leaves than during calm days, and therefore the leaves can absorb the gases of the air more quickly than when opposite conditions prevail. Cold nights check growth, and the elaborated food is therefore largely available for completing the ripening process; rains moisten the soil, keep the leaves fresh and clean, and possibly leaves can absorb the ammonia brought down by rain to a greater extent than scientists generally imagine. No amount of sunshine will make up for lack of moisture in the soil, and it seems that only quite a moderate amount of sunshine is necessary at ripening time to bring about the chemical changes which provide colouring matter, so long as there is a free circulation of air and the fruit is fully exposed to light.—WARWICK.

Potato Harvesting.

The "Home Farm" correspondent, in your issue of September 17, is concerned about Potato harvesting. He states that he is in favour of the digger, as it moves the whole ridge; and speaks of rotary fork diggers, but presumably they are of early make. Not long ago I saw reference made to a new invention which dug, graded, and basketed the tubers. I believe it was a German invention; but I ought to be more definite, and to do so I will use the words of a great American grower. He says: If you intend to grow Potatoes for profit you must have a good digger. If I could sell my experience, with Potato-digger agents and manufacturers, for what it has cost me, I should be well-to-do. There *are* good diggers, but you must make preparation before digging. If the ground is foul the weeds and trash must be cleared off by a "mower" and rake. If the ground is dry and hard, a slanting toothed harrow should be run between the rows to break the crust, thus giving the digger a better chance of separating the tubers from the soil. I am convinced that the Hoover digger is the best all round digger; firstly because it is the only digger that separates the tubers from the trash; secondly because it leaves the tubers in a narrower row, and right out of the way of the horses and wheels when digging the next row; thirdly because the Hoover separates the tubers from the soil by a forward and backward slide, thus allowing the tubers to slide off without bruising, instead of tossing them up as others do; fourthly this digger is strongly made and will bear the strain of heavy and hard soil; finally it has no cogs, is lower geared, and dirtproof in its bearings. I use four horses abreast and for a day's hauling two teams should be used. Boys do all my picking, and with tough skinned Potatoes I load the waggons direct, saving the bother and labour of sacks and boxes."

This is an outline of this big Iowa grower's digging methods; and from his remarks I judge the Hoover digger to be as marvellous in its work as is the reaper and self-binder amongst Corn.—T. A. W.

Scottish Horticultural Association.

Prizes for Cut Chrysanthemum Blooms, 1903.

With your kind permission, I would like to hear the opinion of your readers in general, and Chrysanthemum growers in particular, as to the action of the Executive Committee of the above-named Society in offering a prize of the money value of £36 10s. for thirty-six Chrysanthemum blooms *confined to growers within the municipal boundaries of Edinburgh and Leith*; and the offering of a money prize of only £33 open to the whole of Scotland, for a like number of blooms. Certainly there is a Challenge Cup given with the latter, but as it never becomes the winner's property, it is of no value to him. If preferences of this kind continue to be the policy of the Executive of this Society, they may be offering next year a larger prize, confined to a 500 yard radius of Waverley Market! May I ask those interested, How this can benefit the Society (throughout Scotland), or fulfil in any way the objects for which it was instituted? In my opinion it seems absurd to give so really valuable a prize to such a confined area (where there are so few noted growers), and call it the Queen Alexandra prize. Prizes with such titles are generally "open," so as to encourage the exhibition of the finest productions, and the public will naturally expect to see such in this class. Will they do so?—INTERESTED.

A National Potato Society.

A proposal having been made to establish a National Potato Society, it would be of interest to have the opinions on the matter of those who specialise in Potatoes. We publish two extracts from letters received from leading firms in answer to an invitation from us, and we have received other letters bearing the spirit (so far) of "benevolent neutrality."

"We gladly respond to your suggestion that we should express our views on the question of the proposed Potato Society. In view of the excitement caused by sensational paragraphs in provincial papers, it would certainly seem desirable that some central authority should exist which would be competent to express an opinion for, or against, the value of new Potatoes, for which such high prices are asked. In the outline we have seen of the proposed Society there is so little detail that it is quite impossible to say whether such a Society would or would not be in a position to test the Potatoes thoroughly. It is, of course, evident that a considerable acreage of land would be necessary, and the cultivation itself would be very costly. It occurs to us that now the Royal Horticultural Society is possessed of so valuable a new garden, it might possibly be better to approach the Council of that Society with a view of ascertaining whether they would be willing to carry out such an undertaking. In view of the splendid work which the Society has done in the past, such a proposal, if accepted, would, we feel sure, command the confidence of all."

"We are in favour," writes another firm, "of the formation of the Potato Society proposed. The Potato is an article of such vital importance to the well-being of the community that a National Society should have no difficulty in getting plenty of support, if it is prepared to undertake work which will be distinctly valuable to growers. What such work ought to be will readily occur to all practical minds."

The advisability of forming a society of the above description is being keenly discussed in the horticultural Press, and some excellent suggestions in regard to the matter have been recently advanced by Mr. W. P. Wright, who observes that we are on the "eve of a great Potato boom." I think Potato growers generally will go a step further and admit that we are "in the thick" of such a boom, judging by the sensational prices realised by some recent varieties. Considering the rapidity at which new varieties can be increased when they have once been placed in commerce, it is certainly remarkable that Northern Star should still be so high in price. Good though it undoubtedly is, it has evidently been skilfully manipulated by the Trade, and I question if we have not already reached the height of the boom in regard to highly priced varieties; but there is every probability that Potato-growing will become a much more important industry than it is even now. For that reason I welcome the idea of forming a National Society in favour of the "noble tuber," and I trust that gardeners, and all interested in Potato-growing, will unite and take steps for the formation of such a society. It is a matter of national importance that impetus be given to the raising of real disease-resisters, which crop splendidly, and are of good flavour; and when such have been obtained their merits cannot be too widely known. The public generally should, however, have some real guarantee before they purchase, that new varieties are worthy of the glowing descriptions given of them. In this respect a National Society might do much good by placing a hall mark on approved kinds which have been thoroughly tested by an impartial body of experts. Varieties of the Potato, however, differ so much when grown in different districts and on different soils, that the only true method of testing them is the one Mr. Wright suggests, viz., conducting trial plots in various parts of the United Kingdom.—H. D.



Autumnal Strawberries.

I do not think my friend "J. H. D." (page 350) has laid sufficient stress upon what I believe to be the reason of my success with St. Joseph Strawberry. The secret is, after the chosen runners are selected to root around the original plant, to allow no more runners to appear at all on the whole bed. After the first crop of fruit is over, runners appear in extraordinary abundance, and should be suppressed as soon as they appear, the bed should be carefully gone over at least every other day during August, and every runner pinched right back as soon as it appears. There will still be some fruit, a small supply, but gradually towards the end of August more and more flower trusses will appear instead of runners, till in September hardly anything but flower trusses are formed. The September fruits are much larger as well as much more numerous than the midsummer crop, but I have not yet experienced a decent autumn to do them justice. The St. Antoine bed was burned twice to the ground in the second week in June, and all the ashes were clean swept away; fresh growth was observed on the third day, and a bloom truss in a fortnight. It is my belief that if all runners were suppressed from ordinary Strawberries, the plants would last in vigour a good deal longer than they generally do.—W. R. RAILLEM.

Notes on Pines.

As growth advances more or less in these plants during the winter months, and does no harm provided it is effected by natural means, only sufficient fire heat being employed to sustain the plants in health and maintain the progress made, they should be placed near the glass; this will enable them to make the best of every ray of light and sunshine whenever it prevails. Though the plants may not perceptibly grow, they store essential matter in spells of bright weather, and become stouter where due attention is given to keeping the glass clean and admitting air when necessary. The sturdy plant throws up a large, well developed fruit in due season; but the drawn, weakly plant, though large in leaf, furnishes a much smaller fruit on a lanky stem at an uncertain and irregular time. To give the plants the benefit of clean glass, therefore, and proximity to it without touching, is to grow with a view to fruit; and to keep them at a considerable distance from the glass and covered, or beneath glass more or less opaque through dirt, is to produce foliage instead of fruit. The beds of fermenting materials subside considerably through decomposition, and freshly made up ones settle rapidly unless well trodden down. In either case prompt attention should be given to raising the plants, so that they may have the full benefit of the light, and in doing so take care not to chill or allow them to become overheated at the roots.

New beds should be made as necessary. The best plan is to remove the plants to a structure with the suitable temperature, clear out the old fermenting material, supply fresh, and not return the plants until the beds are in a proper condition. To take Pine plants from a warm house and keep them in a cold place chills them, and returning to warm beds from cool quarters acts in the opposite direction, sometimes causing them to "bolt"—that is, throw up fruit prematurely. Oak, Beech, and Spanish Chestnut leaves are much the best, as they are more durable than others, and the heat is consequently milder and lasts longer. Tan, of course, is best where it can be easily secured, and about half the quantity suffices: but leaves, in many cases, are procurable for nothing beyond the labour.

It is a good and necessary practice to assist the plants according to their respective requirements before winter. If not done earlier, it should be attended to without delay. Fruiting plants require the best places, to swell off the fruits properly, particularly at this season when natural aid is at a minimum. These plants must have a night temperature of 65deg, and 70deg to 75deg by day. Successional plants only require a night temperature of 60deg, and 65deg by day, with an advance from sun heat—but not without air—to 70deg to 75deg. Young plants must not be brought forward too rapidly, because they are not prepared, nor is the winter season an advisable time to cause them to make much growth, and they will progress quite fast enough and satisfactorily in a temperature of 55deg to 60deg at night, and 60deg to 65deg in the daytime, above which ventilate freely, taking care to avoid chills.—PRACTICE.

Early Forced Fig Trees in Pots.

Figs are receiving more attention now than for some time past, which is not to be wondered at, as ripe Figs are very wholesome, and early Figs are very much prized for the dessert. Trees intended for affording fruit at the close of April or early in May will now need dressing with an insecticide, all those advertised being very efficacious when properly applied by implicitly following the instructions. Very little pruning will be necessary, the trees having been regularly stopped during the growing season; but if the growths are too crowded and irregular, they may be thinned to render the trees relatively open and symmetrical.

The house in which the trees are forced should have the woodwork and walls washed with hot water, afterwards lime-washing the latter with hot lime and sulphur, a handful of the latter to each pailful of limewash. A mild bottom heat is almost essential to a successful swelling and perfecting of the earliest crop, the pots being raised upon loose bricks, pedestal fashion, in the position they are to occupy in the bed, and so that the rims of the pots will be slightly above the level of the pit edges. The depth of the pit should be about three feet, and filled with Oak or Beech leaves pressed firmly. Care should be taken to avoid overheating.—F. K. S.

Late Houses of Figs.

Excessively luxuriant trees should be attended to in lifting and root-pruning. Fig trees can hardly have the roots too much restricted for fruitfulness, being also more under control, and can be fed according to requirements. Trees in unheated houses should have free ventilation, and when the leaves fall the trees must be unloosed from the trellis, tied together in convenient bundles, and made safe against frost with some straw or fern over them, encasing the bundles in mats. In heated houses this is not necessary, but the trees in these must not be exposed to severe frost, or they are liable to be injured; therefore a little warmth will be necessary in severe weather. Trees in cool houses should have the roots protected by a covering of dry material, and close up to the stems.—GROWER.

Grapes at Pitcullen, Perth.

It is always interesting to have a walk through the fine gardens at Pitcullen, but more especially when the vineries are at their best. Mr. Leslie, the gardener, has had charge here for seventeen or eighteen years, and is well known as a Grape grower who long ago won his degree in open competition. There are seven houses in all devoted to the cultivation of the Vine at Pitcullen, and each of these has its interesting features. The earliest house at the time of my visit had all the fruit cut, and the Vines were making preparation for next year's crop. Mr. Leslie does not believe in leaving anything to chance, but uses every means to get the wood thoroughly well ripened, as only such wood will produce first-class bunches. Hamburgs are chiefly grown in this house, and the Vines (which are only a few years old) annually yield excellent crops. In the next house we find Hamburgs, Madresfield Court, Duke of Buccleuch, and one or two others. Madresfield Court does splendidly, producing beautiful bunches and invariably colouring well. A small rod of Diamond Jubilee was also here, and this is a very handsome Grape, beautiful in bunch and berry, but unfortunately its quality is only second-rate. Growing side by side was a cane of Duke of Buccleuch, equally handsome in appearance and first-rate in quality. In tasting this variety I was forcibly reminded of my first acquaintance with this noble Grape, something like twenty-two years ago, when I tasted it for the first time in the vinery at Arkleton, when on a visit to my much esteemed friend, the late Mr. James Dickson. Another fine variety is growing in this house, viz., Dr. Hogg, which was a great favourite with the late Mr. Coates, who much appreciated its rich flavour. Its appearance, however, is not such as to commend it to exhibitors, as it is small in the berry and somewhat apt to be irregular in size. To those, however, who appreciate flavour before handsome appearance, Dr. Hogg should find favour. Alicantes are beautifully "finished" at Pitcullen, and at the time of my visit scores of splendid bunches were to be seen. These were really grand clusters, weighing six or seven pounds, slate-black in colour, and carrying a beautiful bloom.

Appley Towers finds favour with Mr. Leslie. It produces medium sized bunches, sets well, and, as a rule, finishes beautifully: the quality is also good. Lady Hutt, which originated from the same source, is also represented. The colour is a trifle against it, but it hangs well, and consequently it is found useful. Gros Maroc is also represented by huge bunches of symmetrical form—a truly grand show variety. A whole house is devoted to Gros Colman, and grand both in bunch and berry they were. Once they are thoroughly ripe, the Grapes in this house will be a perfect picture. Another house, in which Peaches were formerly grown, was recently planted with Colmans, and these are now in full bearing. They are in great demand for winter use. Muscats also have a house devoted to them, and, like the others already noticed, they annually yield heavy crops of excellent

fruit. Mrs. Pince finds a home among the Muscats, and does remarkably well. Mr. Leslie believes in giving his Vines generous treatment, otherwise he could not cut year after year such heavy crops of first-class Grapes. Although a total abstainer himself, he supplies his Vines liberally with something stronger than water from the well. Regarding pruning, the gardener makes no attempt to have beautiful spurs, but rather the opposite, the rods in winter presenting a rather "rustic" appearance. A thoroughly developed, well ripened bud is what is sought for, and the lateral is cut to this, the result being as we have indicated—first-class Grapes. For a long period of years Mr. Leslie has been a successful exhibitor of Grapes at Edinburgh, Glasgow, Dundee, and Perth, and we trust he may still long be spared to grow and show as successfully as he has done in the past.—ALBYN.

The New Melon, "Fiscal Problem."

In making a call at Bear Wood Gardens recently to see the Chrysanthemums, I had an opportunity of viewing the new Melon that was granted an award of merit on October 13 at the Drill Hall, under the name of "Fiscal Problem." On a shelf in one of the houses—there are half-a-dozen here—lay 1½ dozen fruits, and every fruit such as one expects to see in August, rather than the last week in October. I afterwards saw about two dozen more growing on the plants. The fruit is nearly round, strongly but not finely netted, and the habit of the plants was all that could be desired. Mr. Barnes kindly cut one of the fruits for me to taste, and I found the flavour excellent. It is, I believe, the result of a cross between Eureka and a seedling, with the flavour of the former, which, when well grown, is known as one of the finest flavoured Melons in cultivation. I came to the same conclusion as the judges at the Drill Hall—that this is a very fine Melon with a very bad name, which name I was given to understand was not unlikely to be altered.—T. COLE, Swallowfield Park Gardens, nr. Reading.

The Merits of Grapes.

With much of what "Expert" (page 378) writes about the different varieties of Grapes one cannot fail to agree. When, however, he informs us that West's St. Peter's is of no use where appearance at table is the chief merit in a Grape, I trust he will excuse me if I take exception to such an overwhelming dictum. My experience of this variety when at its best, leads me to directly contradict "Expert," and to say that when well cultivated it is a really fine table Grape. I know quite well that it is frequently poor in appearance, small in berry, and loose and straggling in the bunch; but that it can be produced of noble appearance, as well as of good quality, many growers are aware besides—TREWEN.

Combating Apple Scab.

Experimental spraying operations carried on in orchards in Ottawa, furnish excellent illustrations of the necessity of spraying. In every case where a single tree or part of a tree in one of the sprayed orchards was neglected the fruit on such tree or part of tree is to-day hardly worth the trouble of picking, while on all sprayed portions scab is hardly to be found.



Hints to Secretaries of Shows.

I do not intend these notes to apply to secretaries of experience, but to those who may be undertaking this office for the first time. No doubt there are many such, and they may find a hint or two, collected from experience, of some value in guiding them in their duties.

Small details are at times overlooked, and these all add to the smooth working of a society for success or the reverse. One fault with secretaries—a common one—is that of being too easy with exhibitors. Instead of making it a rule to clear the room at a stated time, they are far too lax in this respect. It is a good plan to ring a bell, say, ten minutes before the appointed time, as a warning to exhibitors, and again punctually at the time stated in the schedule. Judges have then ample time to make their awards, and the clerical staff have also opportunity to get awards placed ready by the time the visitors are admitted. I have acted at shows where the awards were not on the exhibits before four o'clock, a state of management very annoying to visitors. If some of these lax secretaries would pay a visit to the Hull Show, for example, and see one of the honorary secretaries (Mr. Dixon) standing in front of the clock in the hall, two minutes before ten, with bell in hand ready to give the warning to clear the room, whether exhibitors are ready or not, they would return impressed with the result of punctuality.

Space should be marked out for all classes in plain letters. As some exhibitors do not appear to understand the class number only, it is a good plan to write on cards distinctly what the class is. For instance, "Class 12, twelve Japanese blooms." In this way an exhibitor can place his exhibits in position without worry-



A bed of St. Joseph Strawberries, Sept. 25th.

See "Autumnal Strawberries," opposite.

ing the secretary or other officials. Some exhibitors make a practice of entering in more classes than they know they can fill properly, in the hope the entries may be small, or the exhibits poor, then they can snatch an extra prize or two. It is very annoying to secretaries to find empty spaces, and especially from

exhibitors who never intended to fill all. In such gross abuses as these, some fine should be imposed.

The method of denoting the winning stand varies with individuals. As fast as the awards are made they should be denoted on the exhibits, and by the time all are adjudicated the visitors can ascertain which are the winning stands. Quite the best system is that of giving to each competitor a full-sized prize card for every exhibit that he enters, he being responsible for the proper placing of each card, which is upside-down in front of the exhibit. Upon the card is written the name and address of the exhibitor and his gardener, denoting also what the class represents, and not merely giving the schedule number, as in some instances, which, to an ordinary visitor, is complicated. A space is left near the top of the card for denoting the value of the prize—first, second, or third. When the award is made and noted in pencil on the back of the card by the judge, all that is required to complete the plan is for an attendant to follow the judges and, with adhesive printed slips, fasten to the space left for the purpose the class of prize gained—1, 2, 3, as it may be. Different coloured slips are adopted by most societies to denote the grades of prizes, viz., red, blue, and black.

When a card is given to all exhibitors (as indicated), those not receiving a prize are generally turned up after the judging by an official. Visitors like to know who are competing unsuccessfully as well as those who do win prizes. Some societies provide cards in the same way as here indicated, but enclose each in an envelope, not to be opened until the awards are made on the envelope. This entails labour which could be better spent elsewhere. The aim here is to prevent a judge knowing whose exhibit he examines. Such a precaution is superfluous with a judge of integrity.

Some societies may not wish to provide a card for each exhibit, on the score of economy in the time required to write them and the cost of such cards. The remedy in such a case is this: as fast as the entries are received, each one is denoted by a number opposite the name and address entered in a book. This same number applies to the exhibitor throughout the show. As many exhibits as he has, as many slips of paper are given him on the morning of the show. To each exhibit he places one slip, and so on throughout the show. Alongside each class—say, "Twenty-four Japanese blooms"—three prize cards are placed, simply denoting first, second, and third prizes, with a space left for the name and address of the winner. As the awards are made, the number of the exhibitor is written in pencil on the back of the card according to its grade. These cards are taken to the secretary's table to have the name and address of the winner, which is found in the entry book. I need hardly say I do not recommend this system. I give it as an alternative for the benefit of those who cannot adopt the full-card system.—E. MOLYNEUX.

Sir William Jackson Hooker.

(Continued from page 349.)

"My father's reputation as one of the foremost botanists in this country was confirmed by his success in the Glasgow Chair, and rapidly rose as his successive publications appeared. Very soon he had but one compeer in Great Britain, Dr. Lindley, for Robert Brown towered above both as 'Botanicorum facile princeps.' It was a happy augury for the progress of the science which both worshipped with single-minded zeal, that Lindley and my father were regarded as meriting equal recognition as scientific botanists and indefatigable labourers throughout forty-five years of their active lives, and that they should have been fast friends till death, within three months of one another."

Referred to from the last sentence is the following interesting footnote, drawing attention as it does to the contemporary career of Lindley, whose name must be of great interest to the Society. "The following admirable summary of the life-works of my father and Lindley respectively is extracted from the Proceedings of the American Academy of Arts and Sciences, May 29, 1866: 'The names of Hooker and Lindley, which stood side by side in our botanical section, are naturally associated as those of the two most eminent botanists in Great Britain; also by the parallel course and near coincidence in the close of their lives. Born in the same neighbourhood, in youth receiving their education at the same school, and early drawn together by similar predilections, they both devoted themselves with singular energy and perseverance to their chosen pursuit; exerted for many years, although in somewhat different ways, a paramount influence upon the advancement of botanical science; and died near together in place and time—the elder at Kew, on August 13 last, at the age of eighty years; the younger at Turnham Green on the 1st of the ensuing November, at the age of sixty-seven years. For a long time they were the two most distinguished teachers in Great Britain, one at a northern, and the other at the Metropolitan University. They severally conducted two of the principal serial works by which botany contributes to floriculture; and they developed into highest usefulness the two great establishments—the Royal Gardens at Kew and the Horticultural Society of

London. Both wrote and published largely—Hooker only upon descriptive botany, in which he greatly excelled, while Lindley traversed a wider field, and grappled with abstruser problems in every department of the science, always with confidence and facility, but not with unvarying success.'"

While Lindley is before us it may not be uninteresting to take another footnote given in the first chapter. He, having shown great zeal and ability as a local botanist, was invited to Halesworth with the view of encouraging him, and that he might there occupy himself in the translation of Richard's "Analyse des Fruits." He had been looking forward to employment as a botanical collector abroad, and this is the amusing incident: "The housekeeper at Halesworth finding that his bed was never occupied, after a vain search for a reason, reported the fact. His distressed host had to ask for an explanation, which was simply that his guest was inuring himself to the hardships of a collector's calling by sleeping on hard boards!"

We now return to the narrative. "As his own reputation advanced, so did that of his herbarium and library, which, before he had been ten years in Glasgow, were reckoned as amongst the richest private ones in Europe. This was due to his active correspondence, judicious purchases, the contributions of his former pupils, especially from abroad, to his methodical habits, and to the welcome he gave to all botanists who desired to consult his collections. For the operation of mounting specimens, &c., he employed aids, of whom I remember two; the first, in about 1827, I think, was a native of Dundee, a keen algologist, James Chalmers by name, who prepared fasciculi of named Algæ, in quarto form, in the disposal of which my father aided him. The other was Dr. J. Klotzsch, who spent some years as the Curator of the Herbarium. Klotzsch was an excellent fellow, a devoted mycologist, and whilst at Glasgow would study no other branch of botany but Fungi. . . . Returning to Berlin, he took up the study of flowering plants, acquired distinction as a botanist, and became eventually Keeper of the Royal Herbarium, Berlin. The only other aids my father had in Glasgow were my mother, as amanuensis, and myself; for, having been attracted to botany from my childhood, much of my spare school and college time was devoted to the herbarium.

"Very soon after the settlement of the herbarium and library in Glasgow, botanists from all parts of Europe flocked to it, amongst whom the following eight made the most frequent and longest sojourns, some of them becoming collaborators with the owner: R. K. Greville, G. Bentham, Sir J. Richardson, G. A. Walker-Arnott, W. Wilson, the Rev. M. J. Berkeley, H. C. Watson, and W. H. Harvey. Mr. Bentham's first visit was in 1823, from which occasion he dated his permanent adhesion to botany as an occupation for life. The next (in 1823) was Dr. (afterwards Sir John) Richardson, R.N., the companion of Franklin in his Arctic expeditions, through whom my father was made known to the Lords of the Admiralty, the Directors of the Hudson's Bay Company, and the chiefs of the Colonial Office, thus becoming the recipient of many herbaria made by the officers of these departments, and the author of works published under their authority. It further led to his being asked to recommend young medical men, fond of natural history, from amongst his pupils especially, to embark in their service abroad."

Numerous interesting associations and important acquaintances made in Scotland must be omitted, but let us take the following paragraph: "In 1828 my father first became acquainted with the Rev. M. J. Berkeley, of King's Cliffe, Northamptonshire, the mycologist, who was then, I believe, on his way to visit Captain Carmichael in Appin. This led to a very intimate friendship and repeated visits to West Park and Kew. Mr. Berkeley took the same interest in the Fungi of the herbarium as Mr. Wilson did in the Musci, and but for him this order of plants would never have attained its present pre-eminence; for his zeal induced my father to urge his correspondents in all parts of the world to collect fungi; with what success is shown by the richness of his herbarium, and the numerous papers on exotic genera and species in the order published by Mr. Berkeley in the botanical journals, in the 'Transactions of the Linnean Society,' and many other works. Mr. Berkeley also contributed the volume on Fungi to the third edition of Hooker's 'British Flora' (vol. v., p. 11, of Smith's 'English Flora'), and, dying in 1889, he bequeathed his herbarium to Kew, together with the choice of his botanical library.

"In 1830 Mr. Hewett Cottrell Watson, the most accomplished of British botanists, then resident in Edinburgh, requested permission to accompany the students of the botanical courses on an excursion to the Breadalbane Mountains, for the purpose of ascertaining the altitudes affected by their plants. Thus commenced a very active and interesting correspondence between my father and this acute botanist, which led to the publication of many papers in the journals conducted by the former, to the botanical expedition of the latter to the Azores, and indirectly to his valuable account of the flora of that interesting archipelago in Godman's 'Natural History of the Azores' (London, 1870). In 1831 Mr. W. H. Harvey, of Limerick (afterwards Professor of Botany in the Royal Dublin Society, and Keeper of the Herbarium, and eventually Professor of Botany in Trinity College,

Dublin), introduced himself by letter, with specimens from two new localities of a West Indian Moss (*Hookeria læte-virens*), found nowhere in the eastern hemisphere, but the south and west of Ireland. It was answered by an invitation to Glasgow, which resulted in an intimacy that amounted to his being regarded as a member of the family.

"I must not close this brief notice of my father's activity in encouraging others without an allusion to the solicitude with which he fostered my own aspirations to become a traveller and botanist; the interest he took in my ambitious projects; the energy with which he aided me in overcoming every obstacle thrown in my way, and prevailed on the higher powers to grant me facilities and the necessary funds; and last, but not least, the liberality with which he helped me whenever other resources were exhausted. In this connection I refer especially to four crises in my scientific career; my appointment to accompany Sir James Ross in the Antarctic-Expedition in 1839 (for which he supplied all my scientific outfit); my (unsuccessful) candidature for the Professorship of Botany in Edinburgh University in 1845; my mission to India in 1847; and my appointment as Assistant Director of Kew in 1855. Add to these benefits the legacy of his herbarium and library, and the truth of the saying, 'One soweth, another reapeth,' forcibly applies.—[A Biographical Abstract compiled by Irwin Lynch from a Life-Sketch sent to the "Annals of Botany" by his Son, Sir Joseph Dalton Hooker, F.R.S., V.M.H., G.C.S.I., C.B., &c.—Journal of Royal Horticultural Society.]

Societies.

United Horticultural Benefit and Provident.

(17th Anniversary Dinner.)

This was held in London on Tuesday evening, Peter Barr, Esq., V.M.H., presiding over 111 members and friends. Mr. Barr read his speech on the toast of "The United Horticultural and Benefit Society." This was replied to by Mr. James Hudson. The other toasts following were: "The Honorary and Life Members," by Mr. A. J. Brown, replied to by Mr. Cox, of Hurst and Sons; "The Chairman," by Mr. C. H. Curtis: "The Visitors," by Mr. W. Woods, replied to by Mr. Thos. Bevan; "The Press," by Mr. Thos. Winter, replied to by Mr. R. Hooper Pearson. The speeches were commendably brief, and mostly to the point. A much appreciated musical programme was rendered by "The Amphion Quartette," which is well known at these meetings. The Society has now 1,040 members, 948 of whom are in England. The invested funds amount to £22,000. Messrs. Barr and Sons became honorary members, with an annual contribution of ten guineas, and Mr. Peter Barr gave five guineas. The meeting dispersed at ten o'clock, after singing "Auld Lang Syne," accompanied by three cheers. With greater space at command in our pages, we will next week give a fuller report. The Secretary's address is 9, Martindale Road, Balham, S.W.

Royal Horticultural, Drill Hall, October 27th.

The Hall was again well filled with a very varied number of exhibits, Orchids being well represented, and, of course, Chrysanthemums. Fruit and vegetables were lacking. A paper on "Pruning Roses," sent by M. Viviani Morel, was read by the Secretary, Mr. G. Bunyard in the chair.

Fruit and Vegetable Committee.

Present: G. Bunyard, Esq. (in the chair); with Messrs. J. Cheal, G. Woodward, W. Bates, S. Mortimer, A. Dean, H. Esling, G. Kelf, H. J. Wright, G. T. Miles, A. G. A. Nix, J. Jaques, G. Reynolds, F. Q. Lane, J. Willard, G. Norman, G. Wythes, and A. H. Pearson.

Mr. T. Chamberlain, gardener to S. Heilbut, Esq., The Lodge, Holyport, Maidenhead, sent some very finely cultivated Celeriac, for which he received a cultural commendation.

Floral Committee.

Present: W. Marshall, Esq. (in the chair); and Messrs. H. B. May, C. T. Druery, G. Nicholson, R. Dean, J. Walker, A. Perry, J. Green, J. F. McLeod, W. Howe, G. Reuthe, J. Jennings, Chas. Dixon, J. A. Nix, Chas. Jefferies, C. J. Salter, W. Cuthbertson, C. E. Pearson, R. C. Notcutt, C. E. Shea, W. P. Thomson, E. H. Jenkins, Chas. Blick, Ed. Mawley, and Geo. Paul.

Messrs. Jas. Veitch and Sons, Limited, Chelsea, contributed a beautiful exhibit of their winter flowering Begonias, of which Mrs. J. Heal is certainly the most attractive. Agatha and Agatha compacta were well flowered. Julius and Ideala were the other varieties staged. The violet flowered *Dædalacanthus narnus* was attractive, as were some good plants of *Salvia Pitcheri*. Also a nice collection of Zonal Pelargoniums, in six-inch pots. The plants were dwarf, and carried excellent trusses of bloom. The most attractive were Dr. E. Rawson, Herrick, E. Bidwell, Mrs. G. Cadbury, Beauty of Kent, Mrs. Chas. Pearson, Iris, Ayesha, Eric, and J. M. Barrie.

From Messrs. H. Cannell and Sons, Swanley, came a fine display of Chrysanthemums of the Japanese, single, and decorative types. The Japs included good blooms of Alfriston, Camden, Miss Mildred Ware, and Mrs. F. S. Vallis. The chief singles were Lavinia, Victoria, Marguerite, Sunbeam, The Lion, and Paris Daisy. They had also a grand display of Zonal Pelargoniums exhibited in glass vases. The blooms were well up to Messrs. Cannell's standard, the chief being The Sirdar, Countess of Hopetoun, Princess of Wales, Duke of Norfolk, The Mikado, Mrs. Williams, Mrs. Ewing, Chaucer, Lady E. Malet, and Mrs. G. Cadbury.

Messrs. T. S. Ware, Limited, Feltham, reminded us that the Dahlia is still fresh, by making a fine display of single and Cactus varieties. The most attractive were Mrs. Reamsbottom, Negress, Miss Roberts, and Huntsman, in the singles; while the best Cactus varieties were Mrs. Ed. Mawley, Vesta, Alpha, F. W. Wellesley, Mrs. H. J. Jones, and Loyalty.

Hardy flowers from Messrs. W. Cutbush and Son, Highgate, were quite a feature. Alpine and rock plants were also arranged, and a nice collection of hardy Chrysanthemums. The latter included Bronze Prince, Sunshine, Martinmas, Lady Fitzwigram, and Golden Fleece. The herbaceous plants included *Shortia galacifolia*, *Polygonum vacciniifolium*, *Polygonum amplexicaule*, and a good variety of Pentstemons.

Mr. W. J. Godfrey, Exmouth, staged sixty exhibition blooms of Japanese Chrysanthemums, with half a dozen incurved varieties. The most noteworthy were Miss Mildred Ware, H. E. Hayman, Lord Alverstone, Sensation, Mafeking Hero, F. S. Vallis, Exmouth Rival, and Colonel Weatherall. The incurved varieties were Devonshire Hero and Mrs. J. P. Bryce, a fine white form, that will be popular with exhibitors.

Messrs. W. Wells and Co., Limited, Earlswood, Redhill, arranged a large group of Chrysanthemums in pots, augmented with a large quantity of cut flowers, all sections being represented. The best Japanese varieties were Bessie Godfrey, Matthew Smith, Lord Alverstone, Mrs. T. W. Pockett, Miss Elsie Fulton, S. T. Wright, Pantia Ralli, G. H. Kerslake, Exmouth Rival, Mrs. G. Mileham, Maynell, Mrs. W. Duckham, Mersham Yellow, Mermaid, and Baden Powell. The singles were a representative collection, while the decorative section was particularly prominent, and included Carrie, Bronze Soleil d'Octobre, Nivette, Madame E. Caynard, and a few unnamed seedlings.

From Messrs. B. S. Williams and Son, Upper Holloway, came a miscellaneous display of stove plants and Orchids, including *Dracæna Lindenii*, *D. Desmetiana*, *D. Bruanti*, *D. Vandendaeli*, *Kentia Fosteriana*, and *Rhopala corcovadensis*. The Orchids consisted chiefly of *Cypripediums*.

A small collection of Carnations in pots was staged by Messrs. H. Low and Co., Bush Hill Park, Enfield. The most prominent were Norway, white; Cressbrook, rosy pink; Mrs. T. W. Lawson, carmine; and Queen Louise, white.

Mr. Norman Davis, Framfield, made a glorious display of Chrysanthemums, arranged most tastefully with Crotons, Palms, and Ferns. The large blooms included boxes of Mr. F. S. Vallis, Madame Carnot, Miss Mildred Ware, Madame Paolo Radaelli, Henry Perkins, Mrs. W. Mease, General Hutton, and J. R. Upton. Large vases were also filled with good exhibition blooms. The best novelty was Beauty of Leigh, a grand new yellow, and quite distinct. Decorative varieties were also employed to good effect.

Messrs. W. Bull and Sons, Chelsea, staged a table of new and rare plants, in which were noted *Davidsonia pruriens*, *Ficus radicans variegata*, a collection of Begonias of the Rex type, and *Dracæna Goldiana*.

From Messrs. W. Cutbush and Sons, Highgate, came a nice table of decorative plants of the foliage order, and included good plants of *Dracæna Massangeana*, *D. Doucetti*, Crotons in variety, *Aralia elegantissima*, and a variety of Palms, the front being formed with *Ficus repens*.

Mr. H. B. May, Dysons Lane Nurseries, Upper Edmonton, arranged a fine display of Dracenas, a few of the most striking being Lord Wolseley, Admiration, Madame F. Beryman, Nubian, Charmer, Ruby, Brilliant, Alsace Lorraine, Monarch, Mayi, and His Majesty. The entire exhibit included ninety species and varieties.

From Mr. G. Lange, Hampton, came a nice exhibit of winter-flowering Begonias. The plants were in six-inch pots, and were beautifully grown, the varieties being Gloire de Lorraine, its white sport "Alba," and Alba grandiflora, the latter being especially good.

From Messrs. J. Ambrose and Sons, Cheshunt, came a group of Roses in pots, which included Lady Roberts, Mildred Grant, Liberty, and Bridesmaid; also Lily of the Valley, cut Roses, Ericas, Cyclamens, Carnations, and a variety of other subjects.

Messrs. B. Ladhams, Limited, Shirley Nurseries, Southampton, made an interesting exhibit of hardy Lobelias, which were very much varied in colour. The most attractive were Ruby, *Cæulea grandiflora*, and Fascination.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, made a bold display of Asters, pretty much in the same style as those ex-

hibited at the Crystal Palace. But the chief interest centred in his display of Chrysanthemums, which included large exhibition blooms, arranged in boxes in the usual way, and large vases filled with decorative varieties. The best of the large varieties were Maud du Cross, a grand new yellow; Lady M. Conyers, Madame Waldeck Rousseau, Master Seymour, Geo. Lawrence, Miss Mildred Ware, Countess of Harrowby, and F. S. Vallis. The decorative varieties included Howard G. Crane, Madge Blick, Captivation, Fleur de Jeunesse, Edith A. Cookson, and R. Pemberton.

Orchid Committee.

Present: H. J. Veitch, Esq. (in the chair); with Messrs. Jas. O'Brien, G. J. Fowler, H. Little, J. Wilson-Potter, W. H. White, H. A. Tracy, W. H. Young, W. Boxall, J. W. Odell, F. J. Thorne, M. G. Gleeson, G. F. Moore, F. G. Ashton, A. A. McBean, F. Wellesley, E. Hill, J. Douglas, J. Coleman, N. C. Cookson, W. Cobb, H. N. Pollett, de B. Crawshaw, H. Ballantine, and W. A. Bilney.

Orchids made a really grand display, and it is doubtful whether a finer display has ever been made in the month of October at the Drill Hall. Messrs. Jas. Veitch and Sons, Limited, Chelsea, arranged a glorious table, composed chiefly of Cattleyas and Lælias. The plants were beautifully flowered, a few of the best being Cattleya labiata, in fine form, C. Mrs. J. W. Whiteley, a grand form, Lælia Digbyano-purpurata, Lælio-Cattleya Nysa, and Cattleya Mantini made the chief display.

Mr. Ballantine, gardener to Baron Sir H. Schröder, Englefield, Egham, made a choice display, including Cattleya Gautheri, Lælio-Cattleya Haroldiana, Cattleya Vigeriana, a beautiful form; C. labiata, Dell variety, a good white form, with a lip tinged with purple and a yellow veined throat. Noteworthy were also Odontoglossum crispum Sanderianum, Cypripedium Baron Schröder, and a well-flowered plant of Dendrobium Phalenopsis alba, carrying a fine spike.

From Messrs. Jas. Cypher and Sons, Cheltenham, came a choice exhibit, the chief features of which were the Cypripediums. The most notable were C. insigne Sanderæ, C. Leeannum virginale, C. insigne Harefield Hall variety (a very fine piece), and C. Ernesti. The exhibit also included some well-flowered plants of Cattleya labiata, C. Mantini, Oncidium Kramerianum (a very large form), also some well-flowered plants of Dendrobium Phalenopsis Schröderæ, and a curious plant of Cattleya x Fernand Dennis.

Messrs. Charlesworth and Co., Bradford, have a grand collection on this occasion, the chief features of which were Cattleya Mrs. Pitt, Cattleya Iris, a beautiful variety; C. Nestor, C.-L. Penelope. Other good plants were Brasso-Lælia White Queen, L.-C. Haroldiana, with a grand lip, also the hybrid L.-C. Haroldiana John Bradshaw.

Mr. Bound, gardener to J. Coleman, Esq., Gatton Park, Reigate, made a fine display of Cattleyas and other Orchids. In the former were noted C. aurea, a fine variety; C. labiata, C. Mantini, C.-L. Master J. Colman, Masdevallia Davisii, in fine form; M. cuculata, also some pretty plants of L.-C. Magnifica.

Mr. Alexander, grower to Captain Holford, Tetbury, also contributed a pretty table of choice plants, the most striking being Cattleya Mantini nobilior, C. Mrs. J. W. Whiteley, C. Fernand Dennis, C. aurea, and a nice collection of Cypripediums.

From Messrs. H. Low and Co., Enfield, also came a valuable contribution, which included good specimens of Oncidium Forbesi, beautiful plants of Phalenopsis amabilis, and P. leucorhoda, Cattleyas in great variety, including good forms of C. labiata, such as C. l. Pride of Southgate; C. Bowringiana, Low's variety; also Odontoglossum grande, and several Cypripediums.

Mons. A. A. Peeters, Brussels, staged a few good Cattleyas, two of which were honoured by the Committee, and are described in the awards.

Mr. J. Davis, gardener to J. G. Fowler, Esq., staged flowering pieces of Renanthera Lowi, arranged with Asparagus Sprengeri; the flowers exhibited a diversity of colouring. Mr. G. F. Moore, Chardwor, Bourton-on-the-Water, staged Cypripediums and Phallo-Cymbidium Charwardense. Sir Trevor Lawrence, Bart., Burford Lodge, Dorking, also set up half a dozen fine plants, one of which was honoured by the Committee (see awards).

List of Medal Awards.

FLORAL COMMITTEE.—Silver-gilt Flora to Mr. Norman Davis, Framfield. Silver-gilt Banksians to Messrs. Cutbush and Sons, Highgate; and Messrs. Wells and Co., Earlswood, Redhill, Surrey. Silver Floras to Messrs. Cannell and Sons, Swanley; Mr. H. J. Jones, Ryecroft Nursery, Lewisham; Messrs. Jas. Veitch and Sons, Ltd., Chelsea; and Messrs. T. S. Ware, Ltd., Feltham. Silver Banksians to Messrs. J. Ambrose and Sons, The Nurseries, Cheshunt, Herts; Mr. G. Lane, Hanworth Road, Hampton; Mr. H. B. May, Upper Edmonton; Mr. J. Russell, Richmond; and Mr. W. J. Godfrey, Exmouth, Devon.

ORCHID COMMITTEE.—Silver-gilt Floras to Baron Schröder, Englefield Green; J. Veitch and Sons, Ltd., Chelsea; Mr. J. Coleman, Reigate; Charlesworth and Co., Bradford; and Mr. J. Bradshaw, Southgate. Silver Floras to Hugh Low and Co.,

Enfield; Capt. Holford, Tetbury; and J. Cypher and Sons, Cheltenham. Silver Banksians to Mr. H. S. Goodwin, Putney; and Mr. Gurney Fowler.

Certificates and Awards of Merit.

Begonia, His Majesty.—A Rex hybrid, with blackish edging to seven of the veins diverging from the base. Wedges of bright purplish-red run in between these veins, the edge being of the same hues, and a metallic grey tint covers the rest of the surface. A.M.

Begonia x Our Queen.—A Rex hybrid, with leaves blackish chocolate in centre, edged the same colour, and having a bar of green about 1½ in from the edge, spotted with purplish-rose. A.M.

Cyclogyne fuscescens (Sir T. Lawrence, Bart.).—Bot. Cert. given.

Cattleya Fabia var. *Marie du Waverin* (A. A. Peeters, Brussels).—A sweet flower, with tricoloured lip. It is purple in the centre and on the upper edges, the middle of the sides being yolk-of-egg hue, the fringed front edge shaded to white. The sepals and petals are white. A.M.

Cattleya F. W. Wigan, Peeters' var. (A. A. Peeters).—Parents: C. Schilleriana and C. aurea. The bronzy-ruddy segments are recurved from the midrib, and very pretty. The lip is broad in front and coloured bright purple, with crimson-gold throat. A.M.

Cattleya Gautheri (Baron Schröder).—Parents: C. Leopoldiana and C. Schröderi. The petals and sepals are pale creamy and mauve coloured; the lip bright mauve-purple in front, milk white backward. A.M.

Chrysanthemum, Miss E. Holding (W. Seward, Hanwell).—An incurved variety, coloured silvery lilac, and light purplish on the inner surface. A.M.

Chrysanthemum, F. S. Vallis (W. J. Godfrey, Exmouth).—A rich canary yellow Jap of good depth and size, with moderately broad recurving petals. It is now well known. A.M.

Chrysanthemum, Maude du Cross (A. du Cross, Esq., Canons Park, Edgware).—A very noble flower of enormous size, and yet it is full of grace. The colour is rich straw-yellow or sulphur, the florets incurving at the tips; these are broad. A.M.

Dendrobium amplum (Sir T. Lawrence, Bart.).—This has a black lip, and brownish, purple chequered segment. Bot. Cer.

Erica gracilis nivalis (Gregory and Evans).—A most profusely flowered form, the showers of bead-like flowers being nearly white. A.M. From Longland's Park Nursery, Sidcup, Kent.

Lælio-Cattleya Haroldiana, var. *John Bradshaw*.—Parents: L. tenebrosa x C. Hardyana. A large handsome flower with fine dark maroon-crimson lip, veined gold in the throat. It is wavy margined. The petals are broad and recurving purplish-bronze. F.C.C.

Lælio-Cattleya Gottoiana Regale (Sir Trevor Lawrence, Bart.).—A graceful flower, with rich glowing purplish-crimson lip, edged mauve. The segments are pale lilac-purple with bronzy overlay. F.C.C.

Nephrolepis Westoni (Cragg, Harrison, and Cragg, Merivale Nurseries, Heston, Middlesex).—A very graceful Nephrolepis of bushy habit, the fronds arching nicely, and the pinnae are moderately erected. N. acuta is said to be a parent type of this. A.M.

Phallo-Cymbidium Chardwareuse (G. F. Moore, Esq.).—A handsome showy bigener, with russety-bronze sepals and petals, and crimson lip veined with gold. The form and texture of the segments reflect the Cymbidium, but the foliage is like Phaius. F.C.C.

Paignton (Devon) Gardeners and Mildew.

The winter session of the Paignton Gardeners' Society for 1903-4 opened last Thursday, when the first monthly meeting was held in the Court Room at the Town Hall. The President, Mr. A. L. Spens, gave a brief but interesting and encouraging opening address, expressing his great pleasure at seeing such a good assembly of members, and especially at having some of the lady members present, and spoke on the general working and prosperity of the association. Mr. J. Crathorn (chairman of committee), who presided over the meeting, having given a general outline of the work of the session, called on Mr. A. E. Jefferies to open a discussion on "Mildew: Its Causes and Cures." Mr. Jefferies said Mildews were Fungi, members of a family extensive and diversified, interesting and beautiful; and whilst some were useful and enjoyable, others were tantalising, objectionable, and destructive. The family was so extensive that their name was legion; so diversified that they assumed all sorts of shapes, sizes, and colours. They were beautiful in form, texture, and colouring. The useful and enjoyable members were such as the Mushroom and Truffle, whilst the objectionable and destructive were the Mildews. He went on to show that these Mildew Fungi thrust their roots down into the pores of the epidermis, robbing the plant of its juices and interrupting its respiration; that they had the power of increasing by shooting or throwing off offshoots, and in this way they very soon wrought great mischief; that at a certain period in their existence these minute plants emitted myriads of seeds, which floated away, and, on alighting on suitable subjects, germinated and carried on the deadly work of destruction. He then gave a list of the subjects attacked by Mildews, and which more especially concerned the farmer and the gardener, viz., Wheat, Peas, Cabbages, Grapes, Peaches, Roses, Chrysanthemums, Orchids, stove plants, and many others, also mentioning a few of their friends.

Young Gardeners' Domain.

Marguerite Carnations.

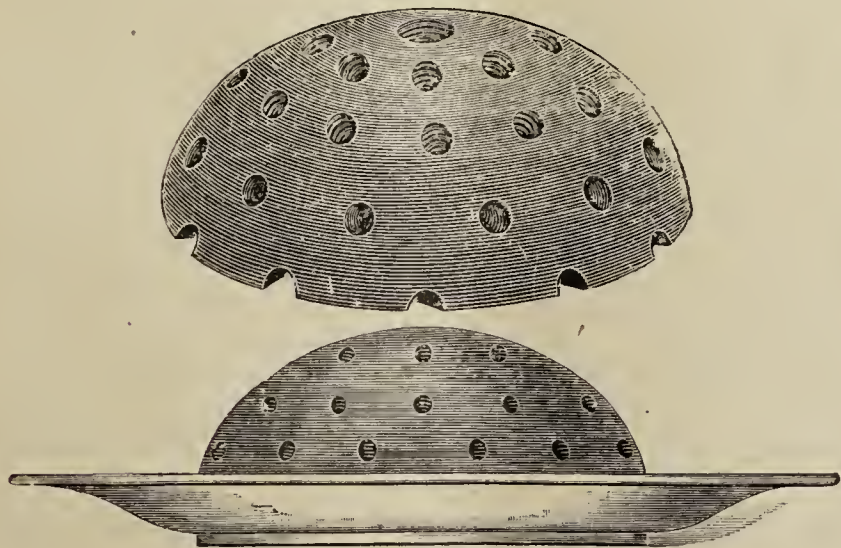
These plants, I am of opinion, are not grown so much as they deserve to be. Few plants afford such a generous and useful display of flowers during the next two or three months in return for the treatment they require. Procure seed of a good strain, and sow in a fine, light, sandy soil in a well drained pan, early in March, and place in a temperature of from 50deg to 60deg F. So soon as the seedlings are large enough to handle, they should be pricked out into well drained pans containing the same compost as above, and these may be placed on a shelf in a cool house. In a month or five weeks they should be ready to pot singly into small sixties in a compost consisting of two parts fibry loam, one of well decayed leaves, and one of sharp road grit; and in removing the plants from the pans care should be taken not to injure more roots than necessary. Place the plants on a bed of ashes in a cold frame, and keep close for a few days, shading them from hot sun, and give water with discretion, and as the plants grow admit air more freely. When in a fit state, transfer to 32-sized pots and return to a cold frame, and keep close till established, after which remove to a bed of ashes in a sunny and open position. When the plants require it, tie them to a neat, well pointed stake. In the autumn the plants will commence to form their buds, and if the pots are well filled with roots the plants will need some nourishment. Soot-water is a good stimulant, with a change to guano, care being taken not to use too strong, as the roots are very fine and easily injured. If large blooms are desired, the plants can be disbudded. —E. B., South Berks.

Malmaison Carnations.

Now, when Carnation layers are engaging attention, is the time when failures can be averted. They should now be all potted into four-inch pots, in a compost of two-thirds good fibrous loam broken very small, and the remaining third to consist of leaf soil, peat, and coarse grit in equal parts. See that good drainage is given. The layers should then be placed in a house or pit where they will secure full light, and if possible they should be on ashes, close to the glass. It will be found that failures are mainly due to overwatering, for the Carnation—or any plant of this type—should be dry before being watered; but in the dull, damp months of winter they are far better if kept dry for a few weeks. They should then be watered on a fine day, as early in the morning as possible, and repeat the operation when quite dry again. Air should be given freely, as, by keeping a moving atmosphere the plants will not be subject to the rust or spot disease to any great extent.

At the beginning of March the plants should be potted into five and six-inch pots, in a compost consisting of two-thirds good fibrous loam (yellow, if obtainable), the remaining third of leaf soil, peat, half-inch bones, and good coarse grit—no chemicals. They should then be put in a house where they can again stand on ashes. Sufficient moisture should come from the floor, as the plants ought not to be subjected to overhead syringing or to steam caused from wetting the pots or walls, and they should again have plenty of air. When showing bud, they will be benefited by an occasional watering with liquid manure or some fertiliser, if the plants are well rooted. —F. H. W., Journeyman.

["F. H. W." writes very well, and we shall be pleased to have occasional notes from his pen. He will certainly find the writing practice good in every way. We would ask him to leave half an inch space at the top of his letter for our use, and to allow a little more space between the lines and at the left-hand margin. —Ed.]



A Handy Flower Support.

The above can be easily made by perforating a piece of flat lead or copper, and then giving it the rounded form. Place this in a dish, and a flower support is prepared.



Fruit Forcing.

VINES: EARLIEST FORCED IN POTS.—Many lovers of Grapes do not appreciate the thick skinned varieties, and desire thin skinned Grapes at all times. In that case it is better to take the early supply from Vines in pots than to start the permanently planted Vines at a very early period. Vines in pots produce fruit little inferior to that borne by others planted out, and often superior to that produced by those having the roots in inside borders, and always better than when the roots are wholly outside. Success in early forcing is more certain where there is convenience for affording bottom heat, the canes being sufficiently strong, plump-eyed, thoroughly ripened, and duly rested. The materials for affording bottom heat—such as two parts tree leaves and one part stable litter—should be in course of preparation. The heat to begin with must not exceed 65deg about the pots, augmenting it by bringing up the fermenting materials to the level of the pots by degrees, so as to raise the temperature to 70deg to 75deg when the Vines are in leaf. We advise the pots to be stood on pillars of loose bricks. Let the Vines be suspended over the fermenting materials in a horizontal position, to induce the buds to break evenly. Sprinkle the Vines three times a day, and damp every part of the house at the same time in bright weather. In order to ensure regularity of starting, a somewhat higher temperature is necessary at this period than later in the season; 50deg to 55deg at night and 60deg to 65deg by day is not too high to begin with. The Vines to have fruit ripe in April must be started early in November.

EARLY FORCED PLANTED-OUT VINES.—Those for affording fruit at the end of April or early in May should be set to work about the middle of November—not later. Thoroughly moisten, but not saturate to soddenness, the inside border at a temperature of 90deg, and in the case of weakly Vines supply liquid manure. This enriches the soil, ever conducting to a good break by the imperceptible ferment taking place in the soil, and by increasing the supply of food. If the border or floor of the house is covered with leaves and litter in a state of fermentation, occasionally turning the material and adding fresh, the moisture and warmth, also the ammonia-charged atmosphere, are very beneficial to the Vines, and make a considerable difference in the fuel used. The outside border must have a covering of leaves, with some litter or fern, sloping from the house outwards, and thus throw off some rain, as well as exclude frost. No roots can work in frozen soil. Fermenting material is not indispensable for placing on outside borders, but the warmth is a great aid in keeping the roots active and near the surface. Outside borders, however, are great mistakes for Vines that are forced early year after year.

VINES FOR STARTING IN DECEMBER.—Prepare the Vines and house for active service at the time stated, which is the latest to have Muscats ripe early in June and the early varieties in May. Prune the Vines directly the leaves have fallen. In pruning, two buds are usually sufficient to leave for securing compact bunches of Grapes. Finger pruning may be practised when the Vines are wanted to give fewer and larger bunches, for it does not answer to allow as many large bunches on a Vine, as of medium sized. Large bunches are as a rule loose, irregular in size of berry, and do not finish satisfactorily. Medium sized bunches are more regular in form and size of berry, and finish well. If the eyes at the base of the shoots are not plump, three eyes may be left, but this requires frequent renewal of the spurs. The Vines should be stripped of loose bark—indeed, all that can be done without stripping them to the live bark—and be washed with a tepid paraffin softsoap solution (4oz to a gallon of water). That is all that is necessary where the Vines are free from insects, and where there has not been mealy bug, scale, red spider, or thrips; but for these use a solution of caustic soda and pearlash (1oz each to a gallon of hot water), applying with a brush at a temperature of 130deg to 140deg; it kills both hibernating pests and eggs. If troubled with fungous pests in previous growth, use a solution of sulphate of iron (1lb to one gallon of water), applying cold with a brush; but do not use both, the latter sufficing for both fungi and insects. The woodwork must be thoroughly cleaned—if necessary, painted—and the walls lime-washed, adding a handful of flowers of sulphur to each pailful of limewash. Remove the surface soil down to the roots, and supply fresh turfy loam with a nine-inch potful of bonemeal to each barrowload. Though a somewhat dry condition of the roots is desirable, the border must not be allowed to become parched and cracked, affording water if necessary, but not saturat-

ing the soil to the extent of making it sodden. Keep the house cool, admitting air freely, except when frost prevails. If the house is occupied with plants, employ fire heat only to exclude frost.—ST. ALBANS.

Hardy Fruit Garden.

PEACHES AND NECTARINES.—These are not generally suitable for any position other than against warm walls, with a south or south-west aspect, fully exposed to sun. The soil must be well prepared, and free drainage afforded. It should be deep, and of a sandy, loamy character, with no manure added. The best trees to plant are fan trained, either as dwarfs or standards, giving them a distance of 15ft between each. They may be obtained from reliable fruit nurseries two or three years old, with an equal number of branches trained at a nice distance apart, of medium strength and healthy character, and possessing good fibrous roots. When obtained, keep the roots from drying, pruning away injured parts, and plant as soon as possible. The holes should be made wide and shallow, a depth of not more than six inches being the extent to which the roots should spread. Some of them may be three or four inches only from the surface. Lay them out to their full extent, and cover a few at a time with soil spread outwards from the stem. Make the soil firm. Only lightly secure the stems to the wall, so as to admit of the trees settling along with the soil. A little shortening of the shoots will be needed in spring. As a preventive against severe frost, spread over the roots a light mulching of manure.

GOOSEBERRIES AND CURRANTS.—The autumn planting of these, whether as bushes in the open or cordons against walls and fences, is almost certain to result in their making a strong and good start the following season. The reason for this is that they become partly well established by freely forming fibrous roots in the warm and fertile soil they find when planting early. Deeply dug and well manured soil must be prepared. They are upon the whole gross growers, and require a fairly rich root run. Over-luxuriance in growth does not, as a rule, result in unfruitfulness, especially if plenty of space is allowed the trees, branches are not overcrowded, and pruning generally judiciously carried out.

RASPBERRIES.—The ground for these, as for Gooseberries and Currants, may be prepared deeply, working in a liberal quantity of manure. Suckers are obtainable from between old stools, selecting those at a distance away, rather than immediately surrounding them, but the main thing is to see that they are furnished with plenty of fibrous roots, though the canes may to all appearances be weakly. Plant in rows not less than five feet apart, the suckers being placed two feet apart in the rows. A trellis should be fixed for training the canes to, two or three lengths of wire strained between posts being suitable. The highest wire may be at the height of five feet. There will be no fruiting the first season, as the canes must be cut down to the ground in early spring, in order that a strong growth may be made the first season.

WINEBERRY.—The Japanese Wineberry may be advantageously added to the usual selection of hardy fruits, growing a few rows in lines running north and south. Fix a trellis or wires, the same as for Raspberries. Prepare the ground, too, in the same manner. Insert the plants three feet apart in the rows, and cut down closely the first season. Train the young shoots to the trellis, giving them every facility to become well ripened by free exposure, and prevent crowding. The shoots made one season will bear fruit the next, hence the pruning mainly consists of cutting out the shoots that have borne fruit immediately the crop is over. The plants will repay good treatment, and may receive during the summer a liberal mulching of manure, as well as applications of liquid manure. The fruit is borne in sprays containing thirty or forty separate fruits of a clear, transparent wine colour, and of the size of very fine Blackberries. They are fully ripe early in September, and are not only good for eating raw, but excellent for preserving—altogether an excellent fruit to follow Raspberries and precede Blackberries.—EAST KENT.

PUBLICATIONS RECEIVED.—Toogood's "Culture of Hardy Tree and Bush Fruits," 6d. * * "Beautiful Flowering Trees and Shrubs," by J. Weathers, 6s. * * Prospectuses on horticultural teaching, by the following County Councils: East Sussex, Staffordshire, Hampshire, Northumberland, and Oxfordshire. * * Agricultural Scheme for Women, Lady Warwick College, Studley Castle, Warwickshire, price 6d. * * "The British Inventor," 1d. * * "Agricultural Economist," October, containing articles on Motors in Agriculture, Welsh System of Harvesting in "Windricks," Portraits and Notes (Right Hon. A. J. Balfour and Right Hon. Joseph Chamberlain). * * "Canadian Florist," Vol. I., No. 12, Toronto, 4s. 2d. per annum. * * "Le Moniteur d'Horticulture," Paris, October 10, with coloured plate of Iris Kämpferi varieties. * * "Floralia," containing coloured plate of Dimorphotheca Eckloni.



* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.

A QUERY.—"Our gardener has grown a vegetable which is new to us, called Asparagus Kale, and we shall be much obliged if you, or any readers of your valuable paper, can tell us (1) What part of it should be cooked? and (2) How it should be cooked?—E. F. T., Larkfield."

SHOW BOARD FOR EXHIBITING CHRYSANTHEMUMS (Inquirer).—The show board or stand for twelve blooms is two feet long, eighteen inches wide, six inches high at the back, and three inches in the front. The top is made of deal half-inch thick, and sloping sides three-quarter inch thick. The holes—three rows—are three inches from the back and front, and six inches between the rows and in the row, the distances being from centre to centre in marking for cutting the holes for the cups. The size given is that usually insisted upon at the principal shows, and known as "regulation" size.

SHEEP ON CRICKET GROUND (A. J.).—Unless the ground is unusually wet and the sheep are penned on the pitch, so as to practically kill the grass crowns, the sheep are an advantage, as they tread and manure the surface so that the grass grows better in consequence, is less liable to suffer from drought, and is better every way for the game. In a certain recreation ground the cricket table—some five or six acres—is kept constantly under the mowing machine, and the county club, who rent the ground, are annually grumbling about its being poor in grass and most annoying by the abundance of the White Clover—this, too, in this remarkably wet summer of 1903. Not half a mile away, and on higher ground—hence naturally drier—there are two cricket pitches in a large field, perhaps twenty acres in extent, and these are open to cattle and sheep from October to March inclusive. These pitches, separated from the remainder of grass during the cricketing season by moveable hurdles, and the grass enclosed kept under by horse mowing machine, are much better for the game than the county club ground referred to—indeed, they are everything the cricketer desires, not a complaint being made against the grounds, while in the other case the grumbings are often and loud—indeed, referred to in the local papers. As the season is so wet, it is matter for judgment as to whether the sheep should be allowed on the ground or not. If not likely to destroy the grass by folding in one place, the sheep will do good—at least, such is the case where we have seen them have the run, in the autumn and up to March, of cricket tables.

STRAWBERRIES FOR FORCING, THROWING UP FLOWERING TRUSSES (J. R. E.).—The damp weather is, perhaps, responsible for the Strawberries in pots, and intended for forcing, throwing up the trusses of bloom at this early stage, the plants being prompted to growth instead of resting and maturing the crowns by the moist and relatively mild autumn. In similar cases we have found it best to nip off the premature shows for bloom, as this only—or at least in our experience—occurs in the case of a crown here and there; and as there are generally other buds on the plant, these will push the trusses of bloom they have formed in embryo in due course. It is seldom, however, that the plants throwing up bloom prematurely give as good results when forced as those that have not started the crowns, especially the chief ones, in the late summer and autumn. Nevertheless, we have known them give useful fruit from the small or side buds. In some cases there are few or no side buds; then the plants, when the trusses showing in autumn are pinched off, give little beyond leaves. The plants sometimes only show the trusses in the crown, and do not develop beyond the extent of a flower or two. In such cases the plants should be kept as cool as possible, not pinching off the trusses, but plunging in ashes in a cold frame, air being given day and night, except when frost prevails, and drawing off the lights in mild and fair weather. The plants will make very little, if any, further progress, and a selection being made of all that have shown the trusses for bloom, these plants can be used for the earliest batches in forcing, say at the beginning of December, for affording fruit in late February or early in March.

SMALL HOLDING WANTED (S. H.).—"On page 344 of the Journal (October 8, 1903), in an article headed 'Small Holdings,' you mention a farm which is soon to be in the market. Allow me to ask where it is, and for any particulars you are able to give concerning it."

To this query our Farm Correspondent answers: "The farm in question (nearly 250 acres) was sold on October 10. If you really are a farm buyer, and, through the Editor, acquainted us exactly with your requirements, we would communicate with you (through the Editor), in case we heard of anything likely. Only large farms are ever sold cheap."

NAMES OF FRUITS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (J. T. R.).—1, Cellini Pippin; 2, Washington; 3, Golden Spire; 4, Golden Noble; 5, Scarlet Nonpareil. (J. B.).—Canon Hall Muscat without a doubt.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (J. P.).—1, *Lonicera japonica*; 2, *Convolvulus Cneorum*; 3, *Tecoma radicans*; 4, Sea Buckthorn (*Hippophae radicans*), male; 5, *Ilex Aquifolium lutescens*. (R. S.).—*Catalpa bignonioides aurea*. (F. N. P.).—1, *Erica vagans*; 2, *E. ciliaris*; 3, *E. multiflora*; 4, *Arbutus Andraehne*. (T. L.).—*Callicarpa purpurea*. (Orchidophile).—1, *Stanhopea eburnea*; 2, *Calanthe Veitchei* var.; 3, *C. vestita luteo-oculata*; 4, *Oneidium crispum*. (N. T.).—*Zephyranthes candida*. (E. J. W.).—Starworts or perennial Asters; the red is *A. Novæ-Angliæ* Mr. J. F. Raynor; the blue, *A. Novæ-Angliæ* sp. (Keay, Surrey).—*Hibiscus syriacus* fl.-pl.

COMMUNICATIONS RECEIVED.—E. E. (Sandbach), O. T., W. H. Y., A. Hope, Toogood & Sons, W. Ellis Groves, W. Scott Stevenson, R. S. S., J. G., T. R., W. Loring, Editor of "Amateur Gardening," J. Julian, Harry Gillett, W. Taylor (will use), H. B., W. B. (Rugby), W. C. G. & Co., Ltd., W. E. Boyce, Dickson's (Chester), R. V. & Son, J. R. S. C. (postcard and letter), Editor of "Paignton (Devon) Observer," Essex Education Committee (per secretary), K. (Dublin) [glad to have your letter], J. Hughes, T. A. (Cirencester), D. Crombie, W. & A. Gilbey, J. J. W., Crompton & Fawkes, W. McK., W. S., W. D., G. S., S. & S., T. C., D. C., T. T. (Wrexham), E. W. & Sons, X. Y. Z.

Trade Catalogues Received.

James Cocker and Sons, Aberdeen.—*Roses, Herbaceous Plants, Fruit Trees, Shrubs, &c.*

J. C. Schmidt, Erfurt.—*Catalogue of Novelties.*

W. Wells and Co., Earlswood Nurseries, Redhill, Surrey.—*Chrysanthemums.*

W. Watson and Sons, Clontarf Nurseries, Dublin.—*Roses, Trees, Shrubs, Fruits.*

Covent Garden Market.—October 28th.

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s d.	
Apples, Canadian Baldwin, per brl.	18	0 to 20	0	Nuts, Cob, per lb	0 5½ 0 6	
„ Greenings, „	20	0	24	0	„ Walnuts, per bag	7 6 8 0
„ Nova Scotia				0	Oranges, case	12 0 15 0
Gravensteins				0	Grapes, Alicante, lb.	0 10 1 3
per brl.	18	0	20	0	„ Colman	0 10 1 6
„ Ribstons, brl.	24	0	27	0	„ Hamburgh	1 0 1 6
Bananas—				0	Pears, Comice, ½-case	12 0 13 0
Canary, finest X large,				0	„ Winter Seckle „	12 0 0 0
per bun.	13	0	14	0	„ Calabash „	12 0 0 0
„ No. 1's ex., „	10	6	11	0	Pines, St. Michael's	3 0 4 0
„ Ordinary „	0	0	9	0	Plums, Californian,	
Cranberries ... per case	10	6	12	0	Black, 4 bkts.,	
Figs, Italian, 12's, 15's,				0	per case	10 0 0 0
per doz.	1	6	1	9	„ Golden Drops, 4	
„ 24's „	2	6	3	0	bkts., per case	14 0 0 0
Lemons, case... „	10	0	15	0	„ Silver Prunes, 4	
„ Malaga, per case	19	0	21	0	bkts., per case	11 0 0 0
„ Naples, 420's, „	27	0	30	0	Pomegranates, Valencia	
				0	120's	8 0 0 0

Average Wholesale Prices.—Plants in Pots

Most of the undermentioned plants are sold in 48 and 32-sized pots

	s. d.	s. d.		s. d.	s. d.
Adiantum cuneatum,			Eulalia japonica ...	12 0	to 15 0
48's, per doz.	6 0	to 7 0	Ferns, var., doz. ...	4 0	18 0
32's, "	12 0	15 0	" small, 100 ...	10 0	16 0
Aralias, doz. (48's) ...	6 0	8 0	Ficus elastica, doz. ...	10 0	15 0
Araucaria, doz. ...	21 0	24 0	Foliage plants, var, each	1 0	5 0
Aspidistra, doz. ...	24 0	36 0	Grevilleas, 48's, doz. ...	5 0	0 0
Asparagus, 48's ...	10 0	to 12 0	Lycopodiums, doz. ...	3 0	0 0
Bouvardias, ...	6 0	8 0	Marguerite Daisy, doz.	8 0	9 0
Chrysanthemums, lifted	6 0	9 0	Myrtles, doz. ...	6 0	9 6
" disbudded specimens	1 0	2 6	Palms, in var., doz. ...	15 0	30 0
Crotons, doz. ...	18 0	30 0	" specimens ...	21 0	63 0
Cyperus alternifolius			Pandanus Veitchi, 48's,		
doz. ...	4 0	5 0	doz. ...	36 0	48 0
Dracæna, var., doz. ...	18 0	21 0	Shrubs, in pots ...	4 0	6 0
" viridis, doz. .	8 0	12 0	Solanums ...	8 0	10 0

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 6 to 3	6	Horseradish, bunch	1 9 to 2	0
" Jerusalem, sieve	1 6	0 0	Leeks, bunch	0 2	0 2½
Batavia, doz. ...	2 0	0 0	Lettuce, Cabbage, doz.	0 6	0 0
Beet, red, doz.	0 6	0 0	Mushrooms, per lb.	1 6	0 0
Brussels Sprouts, ½-sieve	2 0	2 6	Mustard & Cress, doz.		
Cabbages, Spring, tally	2 0	0 0	punnets ...	1 6	0 0
Carrots, bunch	0 2	0 0	Onions, Spanish, case	5 0	0 0
Cauliflowers, doz.	1 0	0 0	Parsley, doz. bunches	2 0	0 0
Celery, per bun. of 8	0 9	1 0	Potatoes, cwt.	4 0	5 0
Corn Salad, strike	1 0	1 3	Radishes, doz.	0 9	1 0
Cos Lettuce, doz.	1 0	0 0	Scarlet Runners, bush.	2 0	3 6
Cucumbers doz.	3 0	4 0	Spinach, bush.	2 0	0 0
Endive, doz.	1 6	0 0	Tomatoes, English, lb.	0 3	0 4½
Herbs, bunch	0 2	0 0	Turnips, bnch.	0 0	0 2

Average Wholesale Prices.—Cut Flowers.

	s. d.	s. d.		s. d.	s. d.
Bouvardia, pink, white, and red, per bun...	5	0 to 6	0	Orchids, Cypripediums per doz.	2 6 to 3 0
Carnations, pink Jolliffe, per doz. bun.	15	0	18 0	" Dendrobiums "	0 0 0 0
" pink, Franeo, "	15	0	18 0	" Dendrobium Pha- laenopsis, per doz.	2 6 3 0
" red, Winter Cheer. per doz. bun.	12	0	15 0	" Odontoglossums,,	3 0 4 0
" white, Deutsche Braun, doz. bun.	12	0	15 0	Pelargonium, white, per doz. bun. ...	4 0 5 0
" Duchess of Fife.,	15	0	18 0	Roses, Bridesmaid, doz.	1 6 2 6
" Uriah Pike, erim- son, doz. bun.	12	0	15 0	" Maréchal Niel, "	0 0 0 0
Carnations, American varieties, cut long— Mrs. T. Lawson, bright pink, per doz. ...	2	6	3 0	" Mermets, doz. ...	1 6 2 6
Royalty, deep pink,,	2	6	3 0	" Niphetos, doz. ...	1 0 1 6
Cream of Pinks, sil- very pink, doz. ...	2	6	3 0	" ex. fine, doz.	0 0 2 0
Dazzler, scarlet, doz.	2	6	3 0	" Perle des Jardins, per doz. ...	1 0 1 9
Cape Gooseberries, per doz. bun. ...	6	0	8 0	" Sunrise, per doz. ...	1 3 1 6
Chrysanthemums— White, yellow, pink,				" Sunsets, per doz.,,	1 3 1 6
				" Safrano, English, dz	0 0 0 0
				Stephanotis, 72 pips ...	2 6 3 0
				Tuberose, per doz. ...	0 0 0 4
				Violets, English, single per doz. bun. ...	1 0 1 6
				" English, double, per doz. bun. ...	3 0 4 0

FERNS, FOLIAGE, MOSS.

	s. d.	s. d.
Asparagus, long, bnch.	2 0 to 2	6
" medium, bunch	1 3	1 6
" short, per doz. bun.	6 0	7 0
" Sprengeri, dz. bun.	9 0	18 0
Smilax, long, doz. trails	3 0	3 6
Maidenhair, best, per		
doz. bunches	0 0	6 0
Berberis, per doz. bun.	0 0	0 0
Croton foliage, various,		
per doz. bun.	9 0	12 0
Ivy leaves, doz. bun.	1 6	0 0
Myrtle, large French,		
per doz. bun.	1 0	0 0
" small English, per		
doz. bun.	6 0	0 0
Moss, natural green, per		
gross bun.	6 0	0 0
" Liehen, full size		
boxes, per box	1 0	0 0



New Potatoes and the Disease.

It is such an universally recognised fact that the healthy life of every new variety of Potato has a fixed term, long or short, as it is of a hardy, vigorous nature or otherwise, and that if new seedlings were not continually introduced, the tuber could not be profitably grown. To those industrious and patient hybridisers, therefore, of which Mr. Clarke, the raiser of Magnum Bonum was representative of the past, as Mr. Findlay is of the present generation, both farmers and gardeners owe a great debt; whilst it is hardly

possible to estimate the benefit they have conferred on the teeming millions to whom the Potato is one of the cheapest, and in many cases the chief, article of diet. Whether it is owing to the fact that Potatoes are now more highly cultivated than they used to be, or not, there is no doubt that the useful life of varieties of recent introduction has been comparatively short. The Regent Tender, as it became in its latter years, enjoyed a fairly long popularity; so did the White Rock. Then we had The Champion, which saved the situation during, and after, the dire season of 1879; and it was immediately followed by the Magnum Bonum which held sway until Mr. Findlay's advent on the stage of Potato culture.

Except the Magnum, every new kind has been more quickly superseded than its predecessors, and this constant substitution of young and hardy stock is no doubt a chief cause of the great success which has attended Potato cultivation in this country. Hybridising has been adopted as a profession by many enterprising people—both firms and individuals—and the number of new varieties annually put on the market is almost bewildering. Considering the nature of the competition, the success of Mr. A. Findlay, of Markinch, N.B., is nothing less than phenomenal, and the striking point about it is its gradual, yet rapidly increasing progress. He gave us The Bruce, then Jeannie Deans, and Her Majesty; then Up-to-Date. The latter we thought would mark the limit of immediate improvement, but he has given us Evergood and Empress Queen, to show us that we were wrong; and now his Northern Star seems destined to beat all records, if it has not already done so. It certainly has beaten all records as a money-maker to the speculator. The three varieties just mentioned, with the addition of a coloured Potato named King Edward VII., are almost the only Potatoes talked about, although great things have been expected from another introduction from Markinch, named Royal Kidney, and a first early, Sir John Llewelyn. Well, wise men take for granted that all is not gold which glitters, and that it is not always the most talked-of Potato that eventually obtains most popularity, and it will be well to examine carefully the credentials of the new gold mines before taking shares in them.

The three necessary qualities in a new sort are: First, cropping powers; second, good table quality; third, hardiness. Many fancy kinds have been boomed and sold at high prices, which are now never heard of when put to the test of extended field cultivation; and put on the market they failed in some one or other of these necessary points. The disappearance of all the old varieties has been due to the loss in course of time of these qualities. The Regent succumbed to disease; the Magnum deteriorated in cropping power; disease was the factor in the cases of Sutton's Abundance, also Her Majesty and British Queen; whilst Reading Giant and Imperator were knocked out by the superior quality of Up-to-Date. So it has always been, and will be, and the question now is: Has the day of Up-to-Date gone by, and what will take its place? It is not sufficient to be a big cropper and sound. Will the great British public eat it? That is a question that cannot be answered here, but only by actual test on the markets. Our friends have been growing Royal Kidney and Sir John Llewelyn, and judging by their testimony, neither variety is likely to be much further heard of in connection with field culture, although the Sir John may prove useful for early work in the garden. Neither kind is free from disease, and both have another and bad fault, viz., want of size, under ordinary field conditions.

Fairy tales about Northern Star are numerous, and if we believed every word we hear, we might be inclined to put all our capital into a field of it. With every allowance for exaggeration, however, there can be no doubt that in the Potato Mr. Findlay has produced a wonder; for we can vouch for the following few records:—It will respond handsomely to the system of rubbing off the young sprouts and rooting them in pots, by which means a large number of plants (twenty, or even thirty) may be raised from one tuber. By this means a nobleman's gardener has this year grown 3cwt from 1lb. A shoemaker by the same system grew 1½cwt from 1lb. The difference in these two results might be owing to the greater facilities and superior technical knowledge of the gardener. Both these growers have sold their stocks at 1s. 9d. per lb.

Another speculator (this time a pork butcher) purchased 4lb and planted them on the single eye system. He succeeded in raising 3cwt, and is refusing an offer of £9 per

cwt for them. Another grower (a saddler by trade) planted 14lb, also on the single eye system. He produced 7½cwt, and sold them by auction, realising £108. The next example is that of a farmer on not very rich soil, who makes a speciality of the cultivation of new kinds of Potatoes. He had a plunge at Northern Star last winter and purchased 2cwt for £60. By planting these very wide apart, and cutting the tubers to single eyes, he made them cover half an acre, but he probably wasted some space. He has only lifted a portion, but estimates his total crop from the half-acre at 6 tons, half of which he has already sold, and he has 2 tons more to spare, the price being £180 per ton. He talks of planting the remaining ton, but may be tempted by price (a bird in the hand you know). We had the opportunity of seeing this gentleman's men lifting a plot of Empress Queen, and we were very much impressed by the weight of the crop and the fine size of the tubers. The owner seemed fairly well satisfied with them, but expects a better return from Evergood, which he considers a better cropper and quite free from disease, which he would not say for Empress Queen.

While speaking of the Evergood we may say that we have this day (October 20) tested our own crop of it, and had 420lb from 60 square yards—about 15 tons to the acre—and only noticed three diseased ones. This was on heavy land, over clay, and under ordinary field cultivation.

Our Northern Star farmer has grown Sir John Llewelyn, Royal Kidney, and Sutton's Ninetyfold, and has sold out all three, as he does not consider them suitable for field culture. We have two reports as to King Edward VII., and they agree fairly well in saying that it is a very heavy cropper, of large size; but it is coarse in shape this season, and then there is the colour against it. We have heard nothing of its cooking qualities. We have tried the flavour both of Empress Queen and Evergood and found both satisfactory, though we liked the Empress a little the better. Evergood is whiter in flesh, but not quite so floury, and rather wanting in Potato flavour. We suppose no one except Mr. Findlay knows the taste of Northern Star yet!!!

Work on the Home Farm.

Better late than never; and at last we are favoured with a spell of fine weather (?). In ordinary seasons Wheat drilling would now be the general employment, but farmers have no time for that yet, though yesterday we saw a press-drill making excellent work. The harrows were covering the seed well, and it would be quite safe from both rooks and larks. Threshing has been so much delayed that machines are now working as long as light will allow, and all are booked until the end of the year.

A good deal of Barley has been knocked out this week, and we are glad to report that the early and well saved crops are turning out excellently, both as to quality and quantity. Crops which appeared but light are turning out 5qrs per acre, at from 30s. to 32s. per quarter, which is very satisfactory for the season. The demand for the best Barley is becoming very keen, but common lots are hardly saleable, which also applies to the Wheat market.

Farmers who are not threshing are lifting Potatoes, and with finer weather the work is much cleaner; but disease is more apparent than ever. Dealers are hanging about and offering improved prices, but insufficient to tempt sellers, who are too well occupied to care about delivering Potatoes yet awhile. So soon as lifting is finished, there will be a great sorting and restoring in the pics, but not many sales, we fancy. Half the crop is lost, but farmers mean to make their money out of the other half. The White Monarch Wheat we spoke of in a previous number has been threshed, and has yielded an excellent return, viz., forty-eight bushels. It is a Wheat we can strongly recommend.

The floods have been very bad for steam cultivation. We found our cultivator men, a day or two since, helping a neighbour to thresh. They state that their engines and tackle have been stranded in a low and wet situation for three weeks, and they will probably not be able to get them out until severe frost sets in. They have orders to last them a year, so their case is truly a trying one; but it is quite as unfortunate for the farmers, who need their services and will have to wait until the proper season for the work is past.

Rams which have been with the ewes three weeks should now be marked with a different colour (black or blue), so that the early lambing ewes may be distinguished later on. Where more than one ram is used, it is a good plan to let them change places, as it makes the farmer more secure of a successful lambing.

No opportunity should be lost of mating cows and heifers with the bull, so that they may calve during the autumn months, when there will be the greatest demand for the young stock.

PLANTING SEASON



PAULS' ROYAL NURSERIES

WALTHAM CROSS, HERTS.

12 miles from London. South Entrance four minutes' walk from Waltham Cross Station; West Entrance three minutes' walk from Theobald's Grove; both Stations on the Great Eastern Railway.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Gold Medals in 1903 from Royal Horticultural and Royal Botanic Societies.

FRUIT TREES for the Orchard, Garden, and Forcing House. Hogg Memorial Medal, 1901.

HARDY TREES for Streets, Parks, and General Planting. Silver Medal from Royal Agricultural Society of England.

SHRUBS, both Evergreen and Deciduous.

CLIMBING PLANTS, Hardy and Greenhouse.

RHODODENDRONS, CAMELLIAS, & AZALEAS.

HERBACEOUS PLANTS in great variety.

BULBS and SEEDS, and all Garden Sundries.

PRICE LISTS ON APPLICATION. INSPECTION INVITED. Upwards of 1000 Medals, Prizes, and other Awards at leading Exhibitions during the past 42 years.

SOLE POSTAL ADDRESS—

WM. PAUL & SON,

WALTHAM CROSS, HERTS.

Rose Growers by Appointment to His Majesty the King.

GRAPE VINES in POTS

Extra Strong Fruiting and Planting Canes in all Leading Varieties.

FIGS IN POTS

All Leading Sorts. Bushes and Fan-trained for Walls.

DICKSONS Nurseries CHESTER

RIVERS'

FRUIT TREES,
ROSES, VINES,
FIGS, ORANGES,
AND

Orchard-House Trees.

A LARGE AND SELECT STOCK
ALWAYS ON VIEW.

ILLUSTRATED & DESCRIPTIVE CATALOGUE,
Post Free, 3d.

THOMAS RIVERS & SON,

SAWBRIDGEWORTH, HERTS.

HARLOW STATION, G.E.R.

CLIBRANS

ORNAMENTAL

TREES & SHRUBS

Charming and beautiful effects can be obtained by planting a selection of the choicer varieties of Trees and Shrubs. The appended collections have been framed with a view of assisting planters to do this.

SPECIAL COLLECTIONS of
DECIDUOUS & FLOWERING TREES.

12 Fine distinct kinds	12/-	Larger.
50 Fine Trees, in 25 distinct sorts	40/-	18/-
6 Lovely and distinct Weeping Trees	9/-	50/-
9 Lovely and distinct Weeping Trees	12/6	15/-
		18/6

SPECIAL COLLECTIONS of
ORNAMENTAL SHRUBS.

6 Pretty and distinct Evergreen Shrubs, in 6 sorts,	4/6, 6/-, 9/- or 12/-
12 Pretty and distinct Evergreen Shrubs, in 12 sorts,	9/-, 12/-, 18/- or 24/-
50 Pretty and distinct Evergreen Shrubs, in 25 sorts,	42/-, 63/-, 84/-, or 100/-
6 Distinct and Lovely Deciduous Flowering Shrubs, in 6 sorts	3/-, 6/-, 9/- or 12/-
12 Distinct and Lovely Deciduous Flowering Shrubs, in 12 sorts	6/-, 9/-, 12/-, 18/- or 24/-
50 Distinct and Lovely Deciduous Flowering Shrubs, in 25 or 50 sorts	21/-, 31/6, 42/- or 63/-
100 Flowering Deciduous Shrubs, in 25 to 50 sorts,	42/-, 63/-, 84/- or 100/-

Above collections are OUR selection only at these prices.

OUR NEW LIST OF
TREES, SHRUBS AND ROSES
IS NOW READY, GRATIS AND POST FREE.

ALTRINCHAM & MANCHESTER

LONDON FERN NURSERIES,

LOUGHBORO' JUNCTION, LONDON, S.W.—Stove and Greenhouse Ferns, large and small, in var., Aralias, Grevilleas, Cyperus, Ficus, Ericas, Palms, Dracenas, Aspidistras, Roses, Azaleas, Carnations, Crotons, Camellias, Chrysanthemums, Cyclamen, Bouvardias, Asparagus, Araucarias, Solanums, Aspidistras, Cinerarias, Genistas, Marguerites, Geraniums, Primulas, Orange Trees, &c. Trade, send for Wholesale List. Special Retail Catalogue, free.—J. E. SMITH.

INTENDING PLANTERS

Are invited to inspect our stock of
**TREES & SHRUBS, FRUIT TREES,
ROSES, RHODODENDRONS,
EXTRA STRONG FRUITING VINES,
STRAWBERRIES IN POTS, &c.**

We have a large stock of the following—

Box, in variety, 2 to 4ft. (30,000).
Golden Yews, in variety, 1 to 3ft. (20,000), and Large English Yew. [Specimens.]
Cupressus, in variety, 2 to 6ft.
Retinosporas 1 to 6ft.
Spruce Fir, 2 to 6ft.
Norway Maple, Sycamore, Mountain Ash, Birch, Poplars, &c., 8 to 16ft.
Hollies, in variety, fine specimens, 8 to 12ft.
Standard Acer Negundo var. (5,000).
" Prunus Pissardii.
" Thorns, in variety.
" Laburnums
Flowering Shrubs, Spiraeas, Deutzias, Philadelphus, Lilacs, Laurustinus, Olearia Hastii, Berberis, St. John's Wort, &c.
Evergreens, Aucubas, Portugal Laurels, Laurels in variety, Privet, &c.
Standard Apples, Cherries, Pears, Plums, Damsons, &c., in large quantities.

CATALOGUE FREE ON APPLICATION.

H. LANE & SON,

Nurseries, BERKHAMSTED, HERTS.



Journal of Horticulture.

THURSDAY, NOVEMBER 5, 1903.

Point Judging.



THE "pointing" system of awarding prizes has had a fair trial, and in some particulars it has undoubtedly proved not to be the solution of the all-absorbing question to exhibitors of garden produce—an assurance that judgment is correct. Moreover, when it fails, and the points credited by adjudicators are presented to the inspection of the public, it renders the system as a whole ridiculous, which it is not; and if the names of the judges are added, it places them in the position of recording a mistake, which afterwards they might be glad had been sunk in oblivion.

A superficial study of the method might lead one to suppose that, provided as the judge is with a comparative list of the numbers each fruit, vegetable, or flower is worth at its best, there is little opportunity left him to make wrong awards, or at least to produce a schedule of misleading points. As a matter of fact, the numbers provided for his guidance are of no value whatever, and they are in practice used merely to record the judgment arrived at in his own mind while examining the material placed before him. The standard of judgment must invariably reside in the mind of the adjudicator, and all his judgments are founded on that standard alone, numbers, on his part, being employed solely to give expression to an opinion of his own, and not to a standard outside himself, inflexible and unchanging, by whomsoever used. But that is not all. The standard that a judge bases his judgment upon to-day may be a different one from that he will use next week. It is one of the peculiarities of the human mind that its judgments are invariably comparative; its standard of efficiency, of quality, of beauty even, cannot be depended on as unchangeable, and, as a

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

matter of fact from the nature of its constitution it is constantly in a state of flux. The heat of a scorching summer is supposed to exceed in its intensity that of any previous summer; the glory of an autumn sunset to surpass in its beauty any seen before. The one can be estimated by no known method; the other, tested by science, shows that the conclusion of the moment is not supported by fact.

As with a sunset, there is no means in existence of testing the correctness of point-judging. The experienced onlooker is, no doubt, able in a few minutes to estimate the correctness of the award, but that is quite another thing from deciding as to whether the number of points have been accorded correctly. If he demurs as to the infallibility of the judges in a particular instance, and is supported by the unanimous opinion of others, it is very certain that the points submitted as a basis by these authorities are in general opinion valueless. That is an extreme case which, though extreme, is not without its examples.

Perhaps in nothing is the futility of pointing more apparent than in those instances where a passing glance, as it were, is sufficient to determine which is the better; yet the judges are obliged to allocate to each dish its proper number of points, and if in anything the system may be made ridiculous it is surely here, when, after a lengthy discussion, the sum total of points brings out a curious closeness in quality between two collections that are in fact very widely apart.

Thus far it has been assumed that judges have possessed as nearly as the human mind will permit of, a uniform standard. As a matter of fact, no such thing exists. A gardener in the South of England acquires a widely different idea of what constitutes perfection in hardy fruits or in vegetables from the northern practitioner. The latter may produce, according to the exigencies of climate, a dish, say, of Cox's Orange Pippin culturally of equal value with the very greatly superior examples of his southern confrère, but would it be right to give them points of equal value, and, if not, on what basis can the judgment of the northern judge be disputed? Or we may take as another instance that of a dish of Onions produced anywhere in Scotland or the North of England. No care, combined with utmost skill, can possibly produce bulbs of equal dimensions with those grown in the sunny South. Is it right to judge each on its merits? If so, it is impossible to mete justice to both.

This brings us to another phase of the question. If there is to be a general standard it ought to be one that can be attained by at least the greater part of the cultivators in Britain, or, on the other hand, there ought to be strictly defined lines of demarcation, beyond which the cultivator favoured of climate cannot pass. The R.H.S. gives its sanction to this in offering separate prizes for hardy fruits produced in counties differing in latitude; but once that theory of climate is materialised it is not sufficient to stay at Apples and Pears: it ought to be extended to hardy vegetables as well, while our northern societies might do worse than follow the initiative of the R.H.S., and sectionise their schedules in the same manner.

I have merely touched on a few of the outstanding features of these phases of exhibiting. Of pointing as a means of aiding judges to arrive at a correct decision in cases where the competition is close I have nothing but praise. The system of making it compulsory and public is quite another thing, and of very doubtful benefit. — R. P. BROTHERSTON.

Science at Wisley.

At the R.H.S. Scientific Committee's meeting, held on Tuesday, October 27th, Dr. Masters drew attention to the desirability of the Society utilising the Wisley garden for scientific investigations in addition to the requirements of horticulture proper. He invited suggestions from members of the committee. It was recalled that recommendations had already been laid before the Council, but they had not seen their way at the time to consider the proposals favourably. Mr. Worsdell suggested communications with foreign horticultural institutions to gather hints of their methods, which might be turned to account. He would maintain that the scientific director should be a broad-minded man, and not merely a specialist; one who had a good knowledge of botany and practical horticulture. He thought a start should be made in a humble way, only such instruments being obtained as the need arose for them. Mr. Massee mentioned the following examples of objects worthy of further investigation, which should be undertaken; The silver-leaf disease, the gumming of Hyacinth bulbs, as well as what may be the causes which render some sorts of Potatoes immune from the disease, &c.

Making a Garden.—I.

Sooner or later the generality of gardeners have to undertake either the alteration of gardens and grounds, or the entire planning, planting, and placing of new gardens in toto. These facts are known from the first year of the gardener's career, and the true recognition of them causes an aspiring man to set seriously to work and master the studies that garden making involves. The construction of a garden does not necessarily imply landscape gardening, for there is little of that nowadays in the United Kingdom, albeit landscape gardening is an everyday phrase; but at times the work of planning and arrangement may be on a scale sufficiently elaborate to entitle the undertaking to be designated landscape gardening. What the scope and pretensions of this magnificent art and calling is can be found on reference to Mr. H. E. Milner's book on the subject, or to Mr. T. H. Mawson's "Garden Making," as well as "Gardens, Old and New," from the "Country Life" Library. Of course, there are smaller books dealing with the making of gardens, but unfortunately they are not easily procurable. Mr. W. Robinson's "English Flower Garden" may be in part taken as a guide to the strictly informal landscape gardening school; while in direct antagonism to this is Mr. Reginald Bloomfield's "Formal Gardens in England."

In the present series we begin the publication of what should be an exceedingly valuable course of papers, for young gardeners especially, and in order to prepare the way for later descriptive articles on the divers features of garden making, the primary work in the art of construction—that of plan drawing—is detailed hereunder.

Plan Drawing.

Of the many and widely diverse methods of occupying his spare time, I can conceive none more profitable to the young gardener, nor more productive of real enjoyment, than plan drawing. The aim of these notes is to engender in the young men a desire to possess a self-drawn plan of the gardens in which they work, and to put them in the way of converting that desire into reality; and as one who has done the work himself, and whose handiwork (be it said without egotism) has invariably secured the unqualified approbation of his employers, I can promise all who take the matter up, with a determination to overcome every obstacle, that they will never regret it, and will in after years regard the time spent as among the most pleasurable of their lives. But on the threshold of the subject let me dispel any doubts they may entertain as to its simplicity, by affirming that they must be prepared to make many small sacrifices and bring into requisition a large store of strong common sense before they can present to the critical eyes of their employer or the admiring gaze of their comrades an accurately described and neatly executed plan.

If any authority be required to endorse my opinion, I have it in the person of Mr. A. Dean, whose name is so well known to readers of the "Journal." I have no recollection of the words he used, nor the occasion which evoked their utterance, but I well remember making a mental note of the fact that he commended the practice of drawing to scale the plan of a garden. If my memory has so badly served me that I have misrepresented him, he will, no doubt, quickly correct me.

I have stated in effect that this exercise of plan drawing is both useful and interesting. I would firstly advise my comrades to examine their conscience as to their knowledge of arithmetic, unless they wish to mar their pleasure by a near approach to arithmetical desperation. The work also necessitates at least a slight knowledge of the principles of geometry, whether acquired through the aid of a text book or the result of our own reasoning powers. Mensuration must also be called into requisition, not only in measuring the land, but likewise when the plan is drawn, in discovering the different areas. Needless to say, an acquaintance with these sciences is of incalculable advantage to every gardener, whether he follows the majority and becomes head of an establishment, or undertakes the fascinating and alluring art of landscape gardening.

Again, we find its utility manifest when alterations are about to be made, because we can then have before our eyes an exact representation of the present state of things, and can study them in their relation to the proposed improvements, and that at times—for instance, the long winter evenings—when it is impossible to bestow the same amount of consideration to the question on the spot. Moreover, it is most useful—and was recently advised by a practical gardener in a contemporary—to have at hand a plan of the kitchen garden, so that we may study the location of the crops during the previous year, and so arrange those of the coming season as to ensure a regular and healthy rotation.

Thus far as to its usefulness; and if proof be required to show the exquisite enjoyment to be obtained both during the certainly tedious task of measuring and drawing, and after the completion of the plan, I would ask our intending surveyor to conjure up an idea of the honest pride he will feel in displaying his modest work of topography to the head gardener or to his employer, the

owner of the place; and in after years, when his plan will have become timeworn, let him again imagine and enjoy, now by anticipation, some of the pleasure arising from the friendly eulogies bestowed on this specimen of art, a safe index in itself of a resolute mind.

In the desirable event of my words having some effect on young gardeners in arousing their ambition and stimulating them to a praiseworthy effort, the following practical suggestions will be found useful. The necessary implements are few and simple, and include a tape measure 66ft, with the links and poles marked on the reverse side, a stout rod about 10ft in length, two or three balls of strong tarred cord, some pegs, and a notebook and pencil. Armed with these, and replete with a good stock of strong common sense, and not a little patient perseverance, our "surveyor" may issue forth on his peaceful enterprise with a full certainty of overcoming every difficulty.

I am well aware that the tape measure is regarded with suspicion by men who have a thorough knowledge of the subject, on account of its susceptibility to atmospheric influence, but I advocate it rather on the score of expense (an important consideration for the majority of those who it is wished will profit by this essay), being less cumbersome and more easily manipulated than the chain; and if the plan drawer makes no more enormous mistakes than would represent the possible inexactness of the tape as compared with the chain, he will have much on which to pride himself. If he will be advised to refrain from using it during wet weather and over damp grass, the inaccuracy will be reduced to a minimum. The cord will be required to form a base line when measuring irregular outlines, and the rod will present a more expeditious method of taking offsets from this than the tape.

Once the good resolution is made, and before metrical operations can commence, it is essential to ascertain the approximate extent of the ground to be included in the plan, in order to discover the most suitable scale to which to draw it. This may be found by roughly stepping the greatest length and breadth, counting each step a yard and adding ten to each number to allow a sufficient margin for any error. According to the estimated extent of the place and to the limit of size which we desire the paper containing the plan should be, must the scale be regulated. For instance, if the estimated maximum length be 500 yards and the breadth 280, and it be desired not to exceed the "double elephant" size drawing paper (40in by 27in), a most convenient scale would be two inches to the chain, or, what is nearly equivalent, 1-32 of an inch to the foot. It is certainly preferable for beginners to use as large a scale as practicable, not only because it is easier for themselves, but also that they may more clearly figure the details; and I strongly urge the use of the chain and links system, as in casting up the areas—presuming the drawer is acquainted with decimals—the work is greatly simplified.

The area being known in square links, and 100,000 of these equalling an imperial acre, it is only necessary to point off five decimal places, and the figures to the left of the point are acres. Should it afterwards be desired to find a given length in lineal or square feet, this may be done by multiplying the links by 0.66 in the former case, and in the latter the square links by 0.4356.

Having procured the measuring instruments, decided on the scale to be employed, and obtained the paper and other drawing requisites, our next consideration is to determine on a base from which to commence operations. As most kitchen gardens form a rectilinear, if not a rectangular, figure, it will be found useful to take the measurements from this. Find out the direction the walls take with regard to the compass, and endeavour to so arrange that a straight line drawn from top to bottom of the paper will be precisely north and south and at the same time parallel to the sides.

When the kitchen garden is accurately measured and drawn—and accuracy here is of prime importance—proceed outward, and as soon as possible get to the boundary and draw along the outside of it a line whose position relative to the kitchen garden is precisely known. The idea then should be to find out and figure on the plan the whole of the boundary thus forming the outer shell, which we may at once fill in by locating the position of all buildings, since they will greatly aid us in discovering the situation of other portions of the garden, the outlines of which conform neither to the run of the ruler nor the sweep of the compass.

In measuring an irregular outline the best plan is to run a line of tarred cord as near to it as possible, and to fix pegs along it opposite every indentation and projection, and having found their distances from the starting point, find also their distances perpendicularly from the fence, treating the spaces between each of these discovered points in the boundary as straight lines. Of course, the greater number of offsets taken, the greater will be the accuracy of the work. When a marked curvature occurs to such an extent that the first cord line would be too far distant to ensure an accurate measurement, or it would be impossible to continue taking perpendicular offsets from it, it is evident that another line must be drawn departing from a convenient point in the original. To transfer this line to the map we must gain an idea of the angle it forms with the original.

Now, measuring the angle with an arc is likely to engender grave error unless proper instruments are used. A way which I have found to be at once simple, convenient, and accurate, is to form a triangle (preferably an isosceles) by joining by a straight line, and at a convenient distance from the angle, the departing line and the produced portion of the original. Thus, if we measure off twenty-five links of each from the angle and find these two points to be seventeen links asunder, we must describe on the corresponding base (twenty-five links) on the plan a triangle having its sides equal to the scale of twenty-five and seventeen; and in this way we discover the direction taken by the new line. On the same principle we may ascertain the location of a tree. Presuming the tree to be within reasonable proximity to a straight walk, we should mark off a suitable portion of this for a base, and from each extremity measure the distance to the tree, which will figure on paper as the apex of the triangle. This principle is based on the seventh proposition of Euclid, which affirms that: On the same base and on the same side of it there cannot be two triangles having their sides terminating at one



Sarmienta repens. (See note below.)

extremity of the base equal to one another and likewise those terminating at the other extremity.

The most difficult part of the measuring business is probably in obtaining accurately the outline of a lake or pond. For this it is better to describe around it a rectilinear, though perhaps necessarily multilateral, figure, corresponding as nearly as possible to the form of the lake. In doing this, however, endeavour to be scrupulously exact in taking the angle, as an error to the extent even of half a link will often throw the whole thing wrong. From the lines of the figure drawn a number of measurements will enable us to form a fairly accurate plan of the sheet of water. I would advise all novices at the work to draw each night the measurements they have taken, thus obviating the danger of accumulating a medley of figures.—WM. ROWLES.

(To be continued.)

SARMIENTA REPENS.—The woodcut shows this neat little Gesneraceous, warm-greenhouse plant. The charming scarlet flowers are shown about natural size. They are of inverted vase shape, hanging in scattered numbers, and make objects of rare beauty. The stems are wiry and ramble somewhat in growth. Propagation is by cuttings, which are difficult to root, but the plant well repays attention. A suitable soil consists of three parts fibrous peat and one part sphagnum, with sand and charcoal; and at Kew the plant is grown in Orchid baskets and the same house as the Vandas and Phalaenopses. It enjoys plenty of water and a warm, moist atmosphere, moderate shade also being necessary.



Oncidium Gardneri.

The figure of this very attractive Orchid came to us from Mr. Charles Jones, gardener at Ote Hall, Burgess Hill, Sussex. We quote the description and remarks made with reference to it in Watson's "Orchids and Their Management":—"A handsome species, with moderately large flowers, very near *O. Forbesi* and *O. eurtum*, from which it differs in the form and crest of the lip, and in having very small column-wings. It has oblong-ovate, furrowed pseudo-bulbs, 2in to 3in long, and dark green, rather broad leaves, which are purplish on the under side. Flower-spike long, branching, many-flowered; sepals and petals 1in long, broadly ovate, with short, stalk-like bases, the margins wavy, shining brown, with yellow edges; lip kidney-shaped, 1½in across, very wavy, with two small basal lobes; colour bright yellow, with broad blotches of brown in a ring round the margin. The flowers, which last several weeks, are produced in summer, about July, and are fragrant. Placed on a teak raft or in a basket, in the cool house, this species grows well and flowers annually. It is found wild on forest trees on the Organ Mountains, in Brazil, whence it was introduced in 1843."

The Week's Cultural Notes.

Angraecum sesquipedale is not in all cases a success, and I am of opinion that the winter treatment meted out to it is often the cause of the trouble. Too much atmospheric moisture at a time when days are short and dark is not at all to its liking; and if there is a dry, warm corner in any of the houses where the specimens of this unique species can be accommodated, they ought to be placed there. In one well-known Orchid nursery they used always to be placed in the centre of the *Cattleya* house, at a point where the hot water pipes turned at right angles, so that nearly double the amount of heat radiated from them, causing a drier heat in winter.

These plants were remarkably healthy, well furnished with leaves to the surface of the compost, and they flowered magnificently every year. There is something in the appearance of the grey-green, hard-looking foliage of this plant that suggests a dry atmosphere, and collectors tell us that in Madagascar there are two distinct types of plants—one growing exposed to sun and air on the top of the tallest trees, the other in hot, shady valleys. Although the latter grow much more luxuriantly, and are leafy and green, they never flower with anything like the freedom that the exposed plants do. This should be a cue for thoughtful cultivators.

Of a different character is the bulky growing *A. eburneum* and its beautiful variety *A. e. superbum*. These are free flowering in the extreme, and nothing seems to injure their health provided they have ample heat and moisture all the year round. *A. e. virens* is not so vigorous, and I have had more difficulty with this than either the type or *A. sesquipedale*. Considerable care is needed in the treatment of the small growing sorts, of which *A. modestum* is a well-known example. Their treatment is more like that recently described for the dwarf *Phalaenopsis*, both at the roots and in the atmosphere.

Anguloas, and other deciduous kinds of a similar habit, must be kept well on the dry side now and until the new shoots appear. A shelf near the glass suits them well in a temperature akin to that of the Mexican house. *Catasetums* and *Cynoches*, resting Chysis, and West Indian *Oncidiums* must have more warmth, but all like the light, and none of them need any more moisture than will keep the pseudo-bulbs plump. Any plants, of course, that have not quite finished growing, will be treated accordingly and given water in lessening quantities until the last leaf falls.

—H. R. R.

Notes on Vandas.

Vanda Amesiana is a plant that delights in sun, being found in exposed positions in the Shan States. Cool treatment is best, but not the same conditions under which *Odontoglossums* and similar Orchids thrive. The Mexican house, or a position close to a ventilator in a house where *Cattleyas* thrive, is better. As a rule, specimens of this delightful species are made up by placing four or five stems in a flattish receptacle, but single-stemmed plants are best in small baskets suspended near the light. It has thick leathery leaves, and flowers at various times during the year upon loose spikes, the flowers being very fragrant, white, with a rosy suffusion on the sepals and petals, and a deep rose lip. A pure white form has also been described.

Of quite a different character is *V. Batemani*, a stately plant, growing 6 feet or more in height, bearing immense spikes of bright yellow blossoms, spotted with crimson and violet-purple,

springing in a semi-erect position from the upper portion of the plant. It is only suitable, of course, for large houses, but in these it is a noble addition to any collection. *V. Bensoni* grows freely in any tropical house; is about a foot high, and bears large erect spikes of flowers. These are white on the reverse of the sepals and petals, yellow inside, dotted with red-brown, the lips with a rich violet centre.—H. R. RICHARDS.

Sir William Jackson Hooker.

(Concluded from page 405.)

"The works published by my father when in Glasgow are very numerous. A complete list of them, with details regarding the more important, will be given at the end of the sketch. They may be grouped under four headings: British Botany, American Botany, Miscellaneous Works, and Serials.

"In the British Botany there was the 'Flora Scotica,' the new edition of Curtis's 'Flora Londinensis,' four editions of the 'British Flora,' and many contributions to a knowledge of British plants in the volumes of his botanical journals." Numerous other works under the classificatory headings mentioned above are then enumerated.

"In the same year (1827), finding that his extensive correspondence with botanists and travellers abroad provided him with information of great value that might otherwise never see the light, and that his herbarium was at the same time teeming with plants unknown to science, my father formed the plan of himself editing a periodical for the diffusion amongst botanists of the information obtained from these sources. As a model he took König and Sims's "Annals of Botany," of which two volumes only had been published (London, 1805-6). He never stopped or stooped to calculate the time, worry, and cost that this undertaking would entail upon him, which occupied him for the next thirty years of his life; for he had throughout no assistant editor, and was dependent solely on my mother, and at intervals on myself when at home, for aid in proof-reading, &c. The heavy correspondence it entailed was conducted by himself alone.

"Including the continuation of the series issued from Kew, these periodicals embrace twenty-eight volumes with 548 plates, of which seven volumes with 247 plates, the greater number of them drawn by himself, were issued from Glasgow. These were the 'Botanical Miscellany,' three volumes with 152 plates (1830-3), the 'Journal of Botany,' two volumes with 44 plates (1834 and 1840), and the 'Companion to the Botanical Magazine,' two volumes with 51 plates (1835-6). In the interval between the publication of the 'Companion to the Botanical Magazine' and the resumption of the 'Journal' he undertook the editorship, with Sir William Jardine and others, of Taylor's 'Annals of Natural History,' which for three years (1837-1840) was the recipient of much of his botanical matter; but the latter became too copious to be included in the numbers of the 'Annals,' and, the result proving otherwise embarrassing, that editorship was abandoned.

"After leaving Glasgow for Kew he resumed the 'Journal,' three volumes (1840-2) of which were followed by the 'London Journal of Botany,' seven volumes (1842-7), and that by the 'Journal of Botany' and 'Kew Garden Miscellany,' nine volumes (1849-57). . . . As a contribution to the history of botany during three decades of the nineteenth century these periodicals were unique; no period or subsequent decade of that century can show so rich a store of valuable botanical material.

"Towards the end of his Glasgow life my father resumed a systematic study of Ferns, which he had begun with Greville soon after his arrival there, the first result of which was the commencement of an 'Enumeration of all known Ferns' published in the 'Botanical Miscellany.' The issue in parts of Hooker and Bauer's 'Genera of Ferns' was begun in 1838; it originated in his having been shown the beautiful analyses of many genera of the order by the veteran botanical artist, Francis Bauer, who offered the loan of these for publication to my father; not that the Order had in the meantime been neglected by him, as is proved by the numerous genera and species described and figured in his journals, in the 'Icones Plantarum' and other works, and by his publication of J. Smith's 'Genera of Ferns.' As I propose to give in an appendix to this sketch of his life a complete account of my father's works, I shall not dwell here on those devoted to Ferns."

The concluding chapter of Mr. Lynch's abridgement of the biography records incidents in Sir William Jackson Hooker's tenure of office as Director of the Royal Gardens at Kew (III. West Park and Kew, 1841-1865), during which period the gardens were changed from nothingness to what they are now. When he accepted the commission, the Treasury looked upon these gardens only as a drain upon finances, and only the earnestness of strong-minded scientists saved them from reduction, if not oblivion. Sir William Jackson Hooker died on Saturday, August 12, 1865, in his eighty-first year.

The Liliaceæ.*

The Natural Order Liliaceæ comprises over 2,500 species, the major portion of which are natives of the temperate regions; thence, although they can scarcely be defined as eurythermal, i.e., living in every climate, yet it would be a mistake to describe them as stenothermal, restricted to few climates. Like man, they are divided into well defined tribes and families, each of which is social, and occur in gregarious groups. Some families, viz., *Lilium*, are nearly cosmopolitan; whilst others, again, are endemic, and true to the region of their birth.

For the most part, the species have in their floral organs a distinctiveness entirely their own. The Amaryllid type, which most closely resembles them, are readily distinguished by their inferior ovary. The forms of their floral leaves are extremely varied, and to convey an impression of this character we cannot do better than quote Ruskin's eulogy to ordinary leaves, which he says are "Linear, oblong, ovate, acute, fimbriated, stalked, sessile," and so on, and so on; in fact, to accurately describe the modifications of the Liliaceæ would necessitate the use of nearly all botanical descriptive terms. The only fault with the flowers of some genera is their short period of freshness, flowering for a week, then fading for ever.

The leaves of most of the genera are developed contemporary with the flowers, or more or less after them. We have persistent leaves, as in *Draena*, *Yucca*, and *Cordyline*. Phylloclades in *Ruscus*, *Asparagus*. Their venation is usually unicostate and parallel, but is reticulate in *Philesia* and *Lapageria*. The majority are acaulescent (bulbous, &c.), but caulescent (stem-producing) forms, as *Cordyline*, &c., also occur. So likewise do climbing stems, as in *Asparagus* and *Lapageria*. Their fruit is either capsular or baccate (berry-like), but baccate fruits and bulbous rootstocks never occur in any one species.

The cultural requirements being so greatly determined according to the structure of their rootstocks, it may be well to give them a few moments' consideration, confining our remarks on bulbous forms to the tribe Liliæ.

THE TRIBE, LILIEÆ.

Firstly, we have the perennial rootstock with fleshy and fibrous roots, as in *Anthericum* and *Tritoma*, which, having no definite resting period, must not be kept out of the soil for any length of time. Secondly, the bulbous forms—a very useful class of plants—which can be removed from the soil, and stored in an airy chamber during their quiescent period, whilst their place is occupied by other plants. Of this class we have various forms. Firstly, the squamose perennial bulb, as represented by the Old World species of *Liliums*. From the under side of the bulbs a mass of fleshy roots are produced, and from the upper side the flowering stem of the year. The basal portion of the stem—that between the surface of the soil and the apex of the bulb—in some *Liliums* gives off copious fibrous roots, which are the chief feeders of the flowering stem. This underground portion of the stem is usually vertical, though in *Lilium Leitchlini* it will creep half a foot, so that, if grown in a pot, and the bulb is planted in the middle, the stem will spring from the side of the pot.

All the scales of the bulbs possess the power of producing new bulbs in their axils, and will do so, in some species at any rate, if the bulb is broken up. Thus, with both bulb and seed production, the skilful operator may in four years multiply his stock fifty-fold. A new bulb, however produced, either by seeds, scales, or bulbils, takes three years to produce a flower stem. The first year we get an ovoid mass, a quarter of an inch thick, of six imbricated scales; the second year a bulb the size of a Hazel Nut; and the third year probably the flower stem, while

the bulb lives on indefinitely, shedding off some scales annually from its circumference. In two Californian species, *Washingtonianum* and *Humboldtii*, this type is departed from, being modified by the central axis of the bulb becoming prolonged horizontally, so that the scales are thrown out of their spiral arrangement, and the bulb is more or less flattened irregularly. Here we get a squamose bulb taking the first step to pass off in the direction of a rhizome.

In most Fritillarias we get a well marked type of structure. Take the bulb of *F. Meleagris* at the time of flowering. This we find as follows: In the centre, the flower-producing stem, with no stem roots. Tightly pressed against the sides of the base of the flowering stem are two hemispherical scales, half as thick as broad, rounded on the outside, and flat on the inside. These are the bases of single leaves, alike in character, and not at all flattened in structure. From the summit of each, before the development of the flower stem, there arises a leaf which dies down before the flower is produced. In the autumn these produce buds in their axils, from one of which the flowering stem of the future year is produced. This type of structure is scarcely varied through half the species, and is known as the tunicated bulb (the same as in Onions). In the

American species there are no outside tunics, and the scales are numerous, small, and granular, *F. pudica* being an exception, as its bulb closely resembles the European species. *F. imperialis* and *F. persica* have squamose (scaly) bulbs, for which reason they were once classed as *Liliums*.

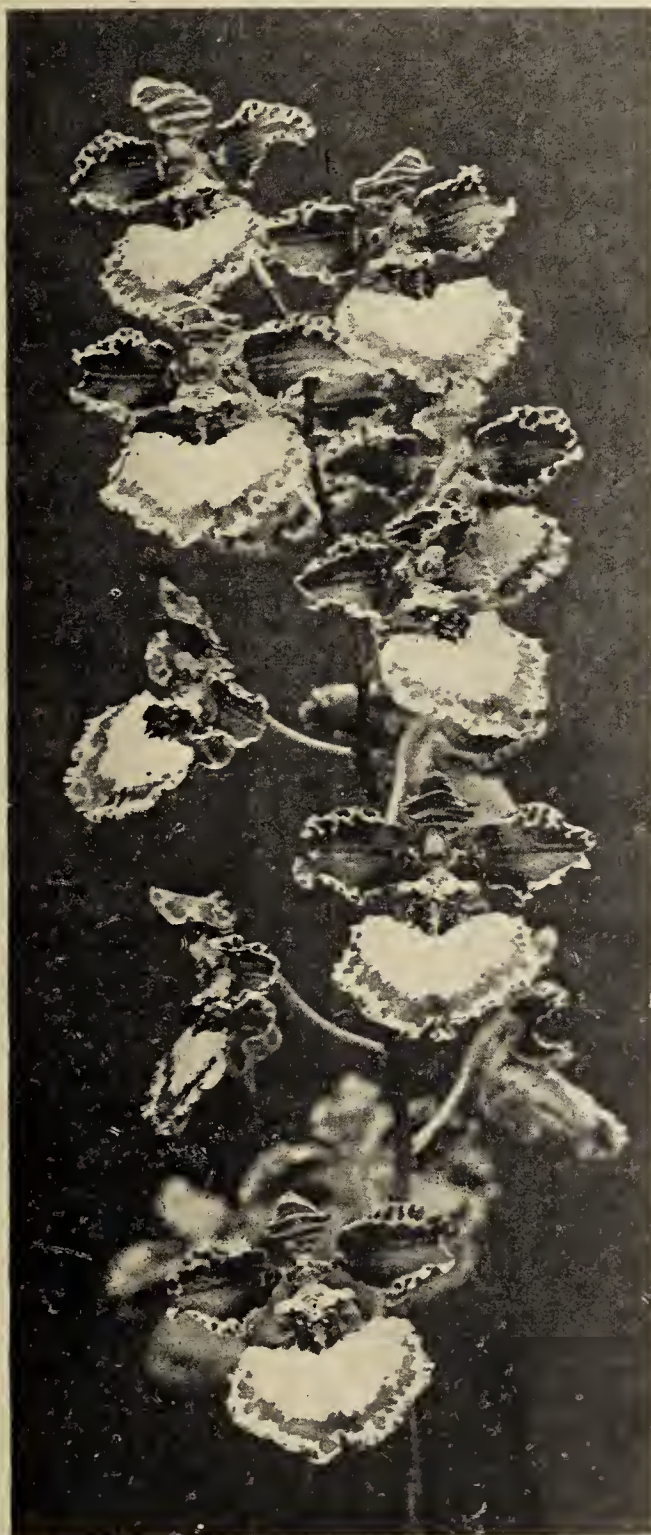
In the third class we have an annual tunicated bulb. This form runs (with much modification as regards the number, thickness, and persistence of the tunics) through *Lloydia*, *Calochortus*, and *Tulipa*. In *Tulipa*, the outer tunics are brown and leathery, the inner ones thick and fleshy. By the side of the old stick-like stem and the developed bulb may be traced the embryonic bulb of the following year; so that the bulbs are really in their third year when producing flowers.

In *Calochortus* the structure is similar, but the inner tunics are fewer and the outer thinner. In the section *Gageopsis*, of *Lloydia*, we have a fourth modification of this structure, viz., a tunicated corm. Here the flowering stem is nursed and nourished by the modified base of a single leaf, which leaf is fresh and green at the time the floriferous stem is developed from the top of the corm. Thus we see that throughout the tribe *Tulipæ* the bulbs, the cycle of whose existence is from one to three years, develop new bulbs in the axils of their scales. In a perennial squamose bulb the old bulb remains, and a new bulb is developed in its centre.

In passing from our superficial description of rootstocks, it possibly may be instructive to allude to one point worthy of notice in their root structure, that in agreement with other Monocotyledonous plants, the roots have no secondary tissue, a complete absence of cambium, the entire structure being developed from the growing point once and for all. Hence it is obvious that in transplanting or otherwise interfering with active roots, every care must be taken not to break them, for if the tip (which is the growing point) be removed, no further growth can ensue, and the root decays entirely.

To give a description of all the species in this Order would necessitate the production of a lengthy paper. The genera to be treated here are not chosen for any special merit, and in consideration of the botanical element in our midst, they are treated in their genetic arrangement.

(To be continued.)



Oncidium Gardneri.

consideration of the botanical element in our midst, they are treated in their genetic arrangement.

BLACKBERRIES IN LINCOLNSHIRE.—Blackberries were never so abundant in Lincolnshire as they are this year. The hedges are literally covered with them, and huge quantities of the fruit are being gathered and sent to the towns, where they are fetching as much as 6d. a pound in the market.

* A paper read before the Kew Gardeners' Guild by Donald MacGregor.



Pentstemon, Newbury Gem.

I note with surprise (p. 296) that Mr. Arnott says this Pentstemon is now scarce. Hereabouts, thanks to Messrs. Ladhams, of Shirley Nurseries, it is plentiful, but not more than its merits deserve. With me it stood outside in a border of stiff, cold soil, unprotected in any way. The same plants have flowered in abundance this year. It is quite a desirable variety for filling bare places in the herbaceous border, or for making an edging to taller sorts in beds or borders. From cuttings it is easily propagated like all Pentstemons.—E. MOLYNEUX, Southampton.

Scottish Horticultural Association.

(Prizes for Cut Chrysanthemum Blooms, 1903.)

Following up the remarks made by "Interested" on page 401 of the "Journal," I have no hesitation in saying that if a vote of the members were taken now, a huge majority would be against the Council. I think it is altogether absurd that £36 10s. should be offered in one class which is confined to Edinburgh growers. I await with interest the statement of those members of the Council who voted for it, and I am pleased to know there were some against giving so large a sum. I expect this will be the first and last year of such absurdity, and that is our consolation.—ANGLO-SCOT.

The Recent Gardeners' Dinner.

To the committee that organised and carried through so satisfactorily that great and very successful festal gathering, the best thanks of everyone who was present are not only due, but are, I feel sure, most sincerely and heartily accorded. Not the least satisfactory result of the voluntary and much appreciated services of the committee is, that the balance of the accounts is on the right side; and the information that the committee has given it to two such excellent institutions. It is sometimes said that, in this life, there is no pleasure without a tinge of disappointment and sorrow. In this instance the tinge (and the only tinge that I am aware of) was occasioned by the absence of those two great friends and supporters of gardeners and gardening, Mr. Leopold de Rothschild and the Very Rev. Dean Hole, and also of those two old and highly esteemed friends, Mr. J. Hudson and Mr. J. Smith, both of whom had served on the committee. The former was absent through illness, and the latter by the stern, ruthless hand of death.—T. CHALLIS, The Gardens, Wilton House.

The Colouring of Apples.

This is a most interesting subject, and one which opens up the possibility of the expression of distinctly conflicting opinions. "W. S.," on page 380, states his case very clearly, and his ideas are very much in accord with my own. That the "cold snap" spoken of by correspondents has a direct influence upon the colouring of fruit is more than I can accept without greater proof than has as yet been offered. If the cold of autumn is directly responsible for the colouration of Apples, how comes it that with few exceptions all those sent us from hot climates are far more brilliant than our own? One might go further and say that those grown in the warmer counties are always better coloured than those grown in colder districts. There is no doubt in my mind that the "cold snap" affects the chemical nature of the soil, and the consequent colouring of the fruit is in some way analogous with the maturing of, and colouration in, foliage in autumn.—PROVINCIAL.

Let me ask your correspondents who hold that rain helps the colouring of Apples whether the "rosy" side of the fruit is not always towards the south or one of its quarters whence sunshine comes? It seems to me that when fruit colours after much rain has fallen in the autumn, it is in spite of the rain rather than because of it. The Apples could not colour fully till they reached maturity, however sunny the weather might be, and when they became nearly ripe they began to colour well, in spite of rain. Shaded Apples do not colour properly, however much rain there may be.

It is not at all unlikely that a touch of frost helps to colour the skin of the fruit, just as it colours the foliage. But has not soil as much to do with high colour as anything? There is a good deal of iron in my soil, and my Apples colour brilliantly when there is enough sunshine. But they did not colour nearly as well during the past season of flooding rains as in the years of drought previous to 1902. They coloured better in 1902 than in 1903, because there was more sunshine in the autumn.—SUNNY SOUTH.

Finances of the Royal Horticultural Society.

Pessimism is rife in reference to the financial position of the Royal Horticultural Society. Pessimism, however, may be regarded as a "hardy perennial." What is the position of the Royal Horticultural Society in its money matters? If it is not all that could be wished, it nevertheless is not such as need cause anxiety. The new hall is to cost £40,000. Of this sum about £25,000 has been promised, and much of it paid. Supposing that no further sum is collected, the Society has at the least £16,000 of invested capital, drawing interest meanwhile. It is said that those £16,000 may not be touched for the hall, owing to a bye-law of the latest Charter. If this be so, it is decidedly unfortunate, and the question will be, Can the bye-law not be qualified so that £15,000 might be employed to capitalise the hall, leaving still £1,000 to the good, which, with £5,000 for the surrender of the Chiswick lease, would give a nucleus of £6,000 with which to begin operations on a small scale at Oakwood? The Society has also an annual income of from £5,000 to £8,000 (which may reasonably be expected for some years, in any case). Judiciously managed, this sum must surely meet the necessary expenses; and so, Where is the difficulty?—LONDON CITIZEN.

A National Potato Society.

I am exceedingly glad that "our Journal" has opened its practical columns to a discussion of this important question.

I observe that two out of the three letters published on page 401 are strongly in favour of the scheme, and the third is by no means hostile. With respect to the suggestion that the duty of developing and protecting the Potato on the lines I propose should be taken over by the Royal Horticultural Society, permit me to point out:

(1) That the Society is now closely engaged with two gigantic undertakings—the new hall and the new garden—and therefore has its hands very full.

(2) That the very essence of the work which I and those in association with me have at heart is simultaneous trial on all sorts of soil. Trials at one place alone, however well conducted, would not suffice.

I hope it is scarcely necessary to say that the establishment of a National Potato Society would not be in any sense antagonistic to the R.H.S. Special societies have a sphere of influence of their own, subordinate to, and in reality a support of, the wider operations of the great Society. New societies come into being from time to time, but the R.H.S. does not grow weaker, it grows stronger. I do not think that the operations of a National Potato Society need be so costly as some may fear, because I believe that the county education authorities would facilitate them. I may add that I have just completed a pamphlet bearing the title, "Potato Perils," and intended as a fairly full case for the establishment of a National Potato Society. It is now in the press, and will be ready shortly. A copy will be sent to the Journal, and to any applicant; but as there is no committee as yet, and no funds, the cost of printing falls entirely upon myself. Perhaps, therefore, correspondents will kindly enclose 1½d. in stamps when writing.—WALTER P. WRIGHT, Postling, Hythe, Kent.

Dahlias: Good Wet Weather Flowers.

Outdoor flowers have suffered so severely by the continuous rains that any flower that can endure the ordeal, and yet present a wealth of fresh flowers and unblemished colours, deserves more than a passing notice. A call at Heywood, Wiltshire, recently revealed to me clearly the great value of Dahlias for making effective borders, and giving sheaves of flowers suitable for vases. With the development of early Chrysanthemums there may not appear the same desire or purpose for Dahlia blooms in the house; but those who have to maintain a regular and frequent supply of fresh flowers in a cut state will readily admit that the Dahlia season, advanced as it is, still provides acceptable material. If anything, I think the fresh, clear, and bright colours are enhanced by the quieter tones of the Chrysanthemums; and as an outdoor flower, at the time of my inspection of the Heywood Dahlias, they were certainly grander than the border Chrysanthemums. Mr. Robinson, whose name has so long been familiarised with exhibition Chrysanthemums, does

not now, nor has he for some years past, allowed the "stage Mums" to altogether monopolise his attention; but this year's display of Dahlias eclipses those of former years, because of the novelties on view. I ought to say that the Cactus section are those favoured in this instance.

The end of October is certainly not a date when such a large, bright, and varied wealth of colour could be expected, nor would it be possible had the slightest frost paid an early autumn visit. As the meteorological observers incline to the opinion that a cycle of wet seasons is pending, it would be as well to remember and emphasise the importance attached to Dahlias, especially for the autumn, and particularly in wet, dripping seasons. They appear to revel rather than languish in continuous showers. Spring struck plants, and new varieties, seem to give the best results.—W.

The Colours of Leaves and of Fruits.

The subject of the variation in the colour of plant leaves and of fruits, especially Apples, has occupied the attention of scientists for many years, and has been found to be one of great difficulty. Sachs says that among the changes caused in plants by long continued depression of temperature, one of the most striking is the change in colour of leaves and of fruits. This change is of two kinds; the leaves either merely lose their colour and become brownish, yellowish, or rusty brown, or turn a decided red on the upper surface. The loss of colour of the first group depends, according to Kraus, on a change in the grains of chlorophyll, which lose their form and definition, a cloudy mass of protoplasm of a reddish brown or brownish yellow colour being formed, while the nucleus remains colourless. These changes are usually more complete on the upper side than in the parenchyma, which lies deeper.

The winter leaves of the second group, which are coloured red or purplish brown on the upper side, owe this colour to a rounded, hyaline, strongly refractive mass lying in the upper cells, which appears of a beautiful carmine red where the leaves are red, but elsewhere of a pale yellow, and consists mainly of tannin. The red colouring matter is soluble in water, and cannot be distinguished from the red colouring substances of flowers and fruits. In all leaves which persist through the winter it is found that when the weather has become sufficiently warm in the spring, the normal condition is restored; the red colouring substance disappears, and the grains of chlorophyll again take up their normal position on the cell walls. Kraus shows that the winter change of the leaves depends on the fall of temperature, since it is restored to the normal state by a simple rise in the temperature, whether in the dark or in the light. It may be remarked that in the present season leaves are slow to assume their usual autumnal tints, owing to the continued moist and mild weather. With the lowering of temperature and a slight frost during the past week, the leaves quickly put on their beautiful yellow and red tints. A single severe frosty night frequently suffices to bring about the change in the form and colour of the chlorophyll grains. The writer has been informed by Mr. A. D. Hall, Director of the Rothamsted Experimental Station, that at Wye College, during the past three years, special experiments have been carried out with Apple trees treated with various artificial manures, with a view to determine their effect upon the colouring of the fruits. It has been found that manures have little, if any, effect upon the colouring of Apples. Mr. Hall is of opinion that the red skin colour is entirely due to a sudden lowering of temperature.—J. J. WILLIS, Harpenden.

A Hint for the R.H.S.

I observe that advice is freely being given to the R.H.S. re what it should and should not do at Wisley. Laboratories for research, large ranges of glass for experiments in hybridisation, and many other suggestions are forthcoming in abundance. Now, I notice we have a "Metropolitan Fellow," page 381, anxious for the Society to obtain models of Apples and Pears. This may appear to be very feasible advice to those not well acquainted with the vagaries of these fruits; but to those who know something of fruit growing and to those who attended the fruit show recently held at Chiswick, and there noticed the remarkable difference in the same variety of Apple, brought from different districts, this advice may justly appear of doubtful utility. Apples and Pears not only vary in different counties, but they vary in neighbouring gardens, and to such an extent as to be quite unrecognisable. On one occasion I knew a gardener make a wager that he would gather three Apples from the same tree, and send them to an authority, and that each Apple would receive a different name. The Apples were sent away, and three names were returned. I simply mention this to show the difficulty of preparing models. For certainly one cast of each variety from any district in England would be of very little use.

I am aware that certain varieties vary very little, viz., Peasgood's Nonesuch cannot be well mistaken. True, it is some-

what like a really good sample of Blenheim Orange sometimes. Or we may take one or two of the Russian Apples, Duchess of Oldenburg, for example. This is a very distinct and unchangeable fruit. When looking over the Apples at Chiswick, I was interested at the great difference in the shape and colour of Cox's Orange Pippin. It is quite possible that if half a dozen of these fruits had been carefully selected and placed before some of our highest authorities, they would have received several names. Therefore I think that a single model of any variety of Apple or Pear would be useless for future comparison, and several would cause confusion. Seeing that there are at least 600 varieties of Apples alone, known to cultivation, it would be no small matter financially to prepare a single cast of each. At present, however, it seems that the R.H.S. is, after all, not over-burdened with cash, for, I observe that in an article in a contemporary on the Wisley garden, the writer easily finds use for £10,000. A large proportion of this large sum is absolutely necessary before the staff can settle there, for the building of the necessary residences and other offices, to say nothing of glass structures. This together with £15,000 still wanting for the completion of the new hall, is a big sum to collect by voluntary contributions. I think, therefore, we will have to exercise patience for our hobbies.—T. ARNOLD, Cirencester.

Akebia quinata.

There is something very attractive about this old, almost hardy climber, which, I think, ought to give it a place in every collection. In Scottish gardens it is, if not a *rara avis*, at least a plant of very limited distribution. The five-fingered leaves, were these its only merits, are quite sufficient to make it an object of no ordinary decorative value for conservatory pillars. The racemes of beautiful purple flowers, which are abundantly produced, are very fragrant as well as ornamental, and suspend in copious masses among the picturesque foliage. The delicious aroma impregnates the whole atmosphere of a house. The plant is a native of Chusan, and probably of Japan, for we read that the Japanese use the plant for medicinal purposes. It is not quite hardy in the North, as at one time it was supposed to be; but it is said to survive in favoured parts of South Britain, West of England, and Scotland, with protection. [Which is true.—ED.] It can be multiplied by the ordinary means, viz., division and cuttings, and thrives best in a compost in which a dash of good fibrous peat obtains.—D. C.

Large Potatoes, and a Heavy Crop of Apples.

Notwithstanding the universal untoward nature of the past summer, large Potatoes seem to be greatly in evidence. In some places we find a single specimen weigh as many as 26oz. The eating qualities, of course, in such cases cannot be expected to be proportionately satisfactory. As far as size is concerned, it would seem that abundance of moisture is not undesirable for the Potato; at the same time, we heard good cultivators of this essential food supply say that the crop can well afford to do without moisture, provided it gets a good drenching after being earthened up. No more is needed till the crop is gathered in. Disease is not so bad northwards as had been expected. I have seen several samples of the big Potato this year, and not later than last week, being on a visit to the gardens of Trinity Grove, Edinburgh, where they were at the time busy digging their crop. The kind was Up-to-Date, and for size, abundance, and regularity could not be beaten. I was also considerably astonished to see there such a heavy crop of Apples. The trees were literally groaning under their heavy loads, and they were nothing to what they were last year. I was told by Mr. McKenzie the dearth of all kinds of fruits so generally felt throughout the country was not in the least experienced there. The early summer frosts which proved so disastrous in most places clearly had little effect on blossom or vegetation there, probably on account of the proximity to the sea, as well as the garden's well sheltered situation.—D. C., Hamilton.

[It is pleasant to hear of the continued fruitfulness of the Apple trees at Trinity Grove. The soil there is almost pure sand on a gravel subsoil, and it is not overfed; nevertheless, there is an annual plethora of fruit, particularly from Stirling Castle, Ecklinville, Lord Suffield, and Ribston Pippin. Every tree, however, crops well; it is their fertility that keeps them fertile—which is neither paradox or pun. Mr. McKenzie finds many of the trees apt to become hide-bound, and he used to enjoy (!) ripping them open by longitudinal cuts. The immediate expansion of the bark before the knife was interesting to observe; indeed, no pressure was needed, for the bark burst asunder. Save that the crevices that followed the cutting formed a harbour for American blight, no harm or damage was done. From the heavy annual crops obtained, it would appear to be all for good. These trees (with which we have had practical experience) are on cultivated vegetable ground.—ED.]

NOTES & NOTICES

Croydon Horticulturists.

At the rooms, Sunflower Temperance Hotel, George Street, a goodly assembly of members on Tuesday, October 20, listened to a highly practical paper on "A Year's Work in the Vinery," read by Mr. W. Taylor, Tewkesbury Lodge Gardens, Forest Hill. The next meeting is on Friday, November 6, when Mr. R. B. Leech, Wood Hall Gardens, Dulwich, will lecture and demonstrate on "Fruit Bottling," and to this lecture the lady friends of members are invited.—H. B.

Royal Horticultural Society.

The next Fruit and Flower Show of the Royal Horticultural Society will be held on Tuesday, November 10, in the Drill Hall, Buckingham Gate, Westminster, 1 to 4 p.m. A lecture on "The Advantages and Evils of Size in Flowers, Fruits, and Vegetables" will be given by Mr. E. T. Cook, F.R.H.S., at 3 o'clock. At a general meeting of the Royal Horticultural Society, held on Tuesday, October 27, thirty new Fellows were elected, making a total of 1,236 elected since the beginning of the present year.

Newport Gardeners' Association.

The following syllabus has been arranged:—October 14: Mr. J. Basham, Bassalleg, "Hardy Fruit, Past and Present." October 28: "Functions of Leaves," by Mr. J. Reece. November 11: "Wonders and Curiosities of the Vegetable World," by Mr. J. Pegler, hon. sec. November 25: "Notes on the Great Fruit and Vegetable Show at Chiswick," by Mr. C. Basham. December 9: "Six Good Vegetables," by Mr. J. Lee, of the Bristol Gardeners' M.I. Association. December 23: "The Duties of a Qualified Gardener," by Mr. J. H. Jarvis. January 13: "Culture of the Cucumber," by Mr. Waller of the Cardiff Gardeners' M.I. Association. January 27: Lecture by G. Brookes, of Clifton. February 10: "Culture of the Tomato," by Mr. H. Woodward. February 24: "Grapes without Fire Heat," by Mr. J. Kenward. March 9: "Gardeners' Friends," by Mr. Reeves, Crindau. March 23: "Salad Plants, and How to Grow Them," by Mr. F. S. Daniels. April 13: "The Herbaceous Calceolaria," by Mr. J. Wiggins. May 11: To decide upon the Outing. June 8: "Achimenes, and How to Grow Them," by Mr. D. Powell. July 13: Open. August 10: Annual Meeting, election of officers, &c. September 14: To consider the rules, &c.

Notes from Newton Mearns, N.B.

Since I last wrote, on October 12, we have had thirteen days of wet weather; but the 23rd was an exceptionally fine autumn day. With such a fine day (Friday) the farmers had an early stir on the Saturday morning, and before daylight many were to be seen out in the fields preparing for the ingathering of the remaining tattered grain; but, alas! no sooner had they started when they were compelled to cease. It is a question if it is worth taking in now. In many places corn which has not been cut yet is standing in about a foot of water. The leaves still cling in much profusion to the trees, and the Hawthorn hedges still show fresh and green by the roadside; others are exceptionally pretty, especially the Rowans, which are clothed in their golden attire. The garden is getting emptier day by day. There are still a few Chrysanthemums showing, and Dahlias that were fortunate enough to escape the last spell of frost are yet giving good blooms; but of all, there is nothing to surpass the Rose. Here, out in all various climatic conditions, the Rose blossoms. It is very encouraging, even in times of despair, to see such remarkably fine blooms of Gustave Piganeau, Captain Hayward, Mrs. Harkness, Oscar Cordel, Ulrich Brunner, Victor Hugo, Marie Baumann, Mrs. Sharman Crawford, and Mrs. John Laing. The Hybrid Teas are giving their third crop, and extra blooms of Goldelse, Pribislan, Frau Peter Lambert, Prince de Bulgaria, Mrs. Grant, Lita, Testout, Killarney, and President Carnot, are to be seen. The Teas are now gone: this weather does not suit them, and it has been a very bad year for the ripening of the wood.—N. R.

Obituary: Mr. G. Summers.

We have to record the death of Mr. G. Summers, Stoke Gifford, Bristol, which occurred on Saturday last, at the age of eighty-five years. A few weeks ago he was knocked down by a cyclist, and the shock was too much for him. To his son, Mr. G. Summers, of The Gardens, Sandback Park, Rotherham, and family, we extend respectful sympathy.

Malton (Yorks) Floral and Horticultural Society.

The forty-fourth annual meeting of this society was held recently. Last year's show merely paid its way. The financial position of the society has been unsatisfactory for some time. Since the last show the several committees had met and went through the sections of the show, and had come to the conclusion that a much more attractive gala might be held if ordinary prizes were altered. Amongst other items by which the prize money would be reduced would be to discard the large specimen plants, as the public did not appreciate them so much as formerly. The secretary, Mr. Thos. Wray, who had held this position for forty-three years, retired. The chairman, on behalf of the committee and subscribers, thanked Mr. Wray for the way he had always carried out his duties. Mr. Wray was elected as the first honorary member.

The Small Holdings Association, Limited.

The first annual inspection of the estate of the Small Holdings Association, Limited, at Cudworth, near Newdigate, Surrey, was held on 17th September, when there was a large gathering. The primary object of the association is the repopulating of the country with cultivators of the soil. The trustees are Sir James Blyth and Mr. J. H. Whiteley, M.P.; the directors are Messrs. J. Tomkinson, M.P. (chairman), J. Spear, M.P., S. R. Whiteley, and James Long (managing director); with Mr. H. B. Long, B.Sc., as secretary. The estate, which is about thirty-one miles from London, has been acquired for the purpose of supplying small holdings of land to selected persons who intend to live upon and cultivate it. Areas of from three to twenty-five acres are offered for sale; the land is specially suitable for garden farming and arable purposes. Purchasers are required to pay down 10 per cent. of the cost price, and the balance in half-yearly instalments extending over ten to fifteen years, with interest at 5 per cent. The cost varies from £20 to £30 per acre, and arrangements can be made for the erection of houses on similar terms to the purchase of the land. The colony is occupied by a number of skilled men, and the success of the project is assured by the system of co-operation introduced by the association.

Reading Gardeners' Association.

The last fortnightly meeting of the above association was held on the 26th ult., and was very largely attended, upwards of 100 members being present. The occasion was the visit of a representative from the Bristol Gardeners' Mutual. Mr. J. H. Vallance was the member selected, and he chose for his subject "The Renovation of Old Vines." His paper was full of interest and of original ideas in the carrying out of the work. Minute details were given as to the lifting of the trees, replanting, soil, manures, and treatment of the young canes. Some of the methods of procedure met with adverse but pleasant criticism, and a lively and animated discussion followed, in which Messrs. Barnes, Hinton, Wilson, Turnham, Neve, Exler, Pole-Routh, Prince, Fry, Alexander, Judd, House, and Stanton took part. A hearty vote of thanks was accorded to Mr. Vallance for his excellent paper, and for the most interesting evening he had afforded the members. In replying, Mr. Vallance and Mr. Groves, the hon. sec. of the Bristol Society, both expressed the wish that the interchanging of lecturers between the two associations would last for many years. There were two or three fine exhibits, honorary, fourteen dishes of Apples, the fruits large and of splendid colour. The most noticeable varieties were Warner's King, Lane's Prince Albert, Stirling Castle, New Hawthornden, Cox's Orange Pippin, King of the Pippins, and Fearn's Pippin. These were staged by Mr. E. Fry, The Gardens, Greenlands, and he was congratulated on having such fine fruits in so bad a season. Three plants of well grown Clerodendron fallax, raised from seed sown in May, by Mr. F. W. Exler, The Gardens, East Thorpe. For certificate, six dishes of splendid fruits of Warner's King Apple, entered by Mr. H. House, The Gardens, Oakfield (certificate awarded), and Impatiens Sultani, by Mr. E. S. Pigg.



Spring Bedding.

Where preparations have to be made for a display of bloom next spring, it will be advisable to lift the plants which have done duty throughout the summer as early as possible. The soil should then be dug and the beds made ready to receive the plants. These will include such as *Myosotis*, Wallflowers, *Polyanthus*, *Aubrietias*, spring flowering *Phloxes*, *Arabis*, especially the double variety, *A. alba plena*, which is very effective used in this way, *Primroses*, &c. Any surplus plants which are not required in the beds can be placed about in the shrubberies or flower borders, where they have a very pleasing effect, *Myosotis* especially, and if planted in good patches by the side of water or in a damp spot these will succeed admirably.

Choice Bouvardias.

At the latest Drill Hall meeting Mr. H. B. May contributed a beautiful display of autumn flowering plants in which the *Bouvardias* were, perhaps, most interesting. These were arranged in blocks of each colour, the best being Mrs. R. Green (pink), President Cleveland (scarlet), President Garfield (double pink), Alfred Neuner (double white), Bridesmaid (double light pink), King of Scarlets (the best single scarlet), and Pride of Brooklyn (white). He had also good plants of *Begonias*—*Gloire de Lorraine* and Mrs. L. de Rothschild, while the shrubby *Veronicas* were excellent. The best forms were Diamant (red), Reine des Blanches (white).

Risks in Gathering Plants.

The white blossoms of the *Eidelweiss* frequently lure even experienced mountaineers to their doom, as it generally grows in most inaccessible places, with the result that an attempt to pluck it is often fraught with disaster. Only last summer a well-known German professor of the University of Leipsic lost his life on Mont Rosa while gathering this plant. The mountain Saxifrage has cost numerous lives, and the Alpine Pink is responsible for a heavy death toll. We need not, however, go outside our own island to find instances of human lives that have been sacrificed for flowers. In Ireland there is a little flower that blossoms in bogs, which is greatly prized by the peasantry to dye their homespun garments with. The neighbourhood of the Bog of Allen teems with stories of women and children who have been lost on the lonely bog while gathering this plant; and in the Highlands of Scotland the White Heather is frequently referred to by the Gaelic-speaking inhabitants as the "white flower of death," on account of the number of people who have lost their lives while gathering it in the mountains.

Agathæa cœlestis.

Agathæa cœlestis or, as it is generally called, the Blue Marguerite, is a small evergreen shrub, very useful for furnishing in the conservatory. Its silver-like leaves show to advantage when placed among other Ferns or other green-foliaged plants. The flower which it produces is of a very bright blue. Propagation is effected by means of cuttings. They can be raised from seed, but to obtain serviceable plants in the shortest time propagation by cuttings is advised. These should be taken in March and inserted round the sides of 3in pots filled with a sandy soil. When the cuttings are nicely rooted pot them off singly into small pots, using good sandy loam and a little peat. As the plants grow keep the shoots pinched in order to form bushy plants. Shift on into 54 and 48 size pots when they are well rooted; the latter size pot is quite large enough in which to grow this plant in. If required to bloom in the winter, the flower buds should be picked out as they appear, until the end of September, and then allow them to develop. As a bedding plant the *Agathæa* might be employed more extensively than it is at present. Given a somewhat dry and sunny aspect it does exceedingly well; it is especially serviceable used as a carpet to taller growing plants. For bedding purposes the cuttings should be put in some time in August.—G. R., Waddesden.

The Orchid League.

A West End florist was quick to turn to advantage the suggested Orchid League. He displayed a notice intimating that a sympathiser with the movement ought to wear an Orchid, indicative of his appreciation of Mr. Chamberlain. He "could supply the same in infinite variety fresh daily."

The Liverpool Botanic Garden.

Amongst the flowers showing strongly are *Salvia splendens*, *Begonias Gloire de Lorraine*, Mrs. Leopold de Rothschild, and Turnford Hall. They are arranged in groups of twenty plants each, interspersed with greenery. *Cattleya labiata autumnalis* is well represented, and several groups are arranged at intervals in the warm houses. The fine specimens of economic plants are gaining interest here. *Coffea arabica* (the coffee tree) is carrying large clusters of fruits, and so is the Cotton plant (*Gossypium*). A fine specimen of the Gamboge tree (*Xanthochymus pictorius*) is carrying over 100 green fruit. There is also a fine crop of those curious looking Cucurbitaceous fruits, the plants trained and suspended on the roofs in the intermediate house. The Bottle Gourd (*Lagenaria vulgaris*) and the Luffas attract a good deal of attention. The *Aristolochias* are flowering unusually free this season, especially *A. gigas*, the Pelican Flower. There are many other subjects which are equally interesting, and young gardeners in the neighbourhood who have not yet seen these gardens would spend a few hours there with profit and pleasure.—J. S.

Mitraria coccinea.

This beautiful plant is, like not a few of our old friends, nowadays little seen in the ordinary garden collections of plants. Like the Heath and the hardwooded race of greenhouse plants this one has been bundled "doon the burn" by an inexorable law of fashion. The scarlet, pendant flowers of the *Mitraria* give a characteristic effect to the plant, either when grown as a pot or climbing plant. Though properly speaking a climber, it can be equally grown as a low pot shrub. Perhaps the fact that it does not thrive well in an arid temperature has done much to oust it to obscurity. In such circumstances it is very liable to attacks of thrips, which cause the foliage to fall off at the expense of the beauty and health of the plant.

The small leaves are covered with minute hairs, and the colour is of a deep shining green, and the whole plant resembles, in a very marked degree, *Fuchsia microphylla*—itself an old-fashioned plant. Potted in fibrous peat and sandy loam, with good drainage, it ought to give a fair account of itself, and can either be propagated by cuttings or divisions. It is a native of Chiloe, and is sufficiently hardy to admit of cultivation out of doors in some parts of Britain. It belongs to the family of Gesnerworts, and is evergreen.—D. C.

Calceolaria Burbidgei.

For winter and spring blooming this shrubby species has a strong claim for notice from those who require decorative plants in the conservatory or the dwelling room, and particularly where yellow flowers are appreciated. It is best propagated by cuttings taken about April, employing a gentle bottom heat to assist an early root callus; and later they can be shifted, as they require more root-room, into pots of progressive sizes, until those of 8in are occupied. These pots give large, freely-flowered bushes that, when in the height of floral beauty, are striking objects; more so because of their out-of-season character, and the pleasing pale yellow colour of the flowers. Judging from the infrequency with which one meets with it in gardens, this species, unlike the ordinary bedding kinds, is not so well known or so familiar. That there are many species of plants cultivated in our greenhouses less deserving of space must be admitted by anyone privileged to see or grow *C. Burbidgei*. At Leighton, Westbury, Mr. Bonnd has for several years possessed a stock which in its season finds admirers among the many visitors to W. H. Laverton, Esq. In their season they have the useful trait of maintaining a succession of golden flower trusses, and are thus not so fleeting as many greenhouse plants commonly cultivated. Soft succulent shoots are the best for rooting; with any tendency towards woodiness they are stubborn of root, but with suitable frame accommodation and good cuttings this is not so marked.—W. S.



A Notable Quartet.

So long as the snowy Madame Carnot and its primrose sport—Mrs. Mease—are staged in such magnificent form as they are at the exhibitions of this week, and most likely at those to follow, so long are they worthy of pictorial reproduction in our pages. Also, while the blooms that come from Mr. Norman Davis, of Framfield, Sussex, are unsurpassed, and generally quite unequalled, there is still something left for cultivators to master in their connection. And have we discarded *Australie* in favour of a (W.) Duckham or similarly coloured variety? Surely not; *Australie* will last yet awhile. Lastly, there is the early white exhibition Jap, Madame Gustave Henry, of sturdy habit; and each are amongst the most favoured of exhibition Chrysanthemums.

Chrysanthemums at the Botanic Gardens, Liverpool.

The chief attraction here at this season is the magnificent array of Chrysanthemums. These attract crowds of the Liverpool public almost daily, and over 1,000 are arranged in the large span-roofed show house, 500 of these occupying the centre bed, and consisting of fine specimen flowers. We observed the following varieties, which are quite up to the exhibition standard, excellent in colour, substance, and form: Miss Elsie Fulton, Miss Mildred Ware, Mr. Bagnell Wilde, Miss Maynall, Miss Alice Byron, Mrs. Greenfield, Rev. W. Wilks, Mrs. W. Popham, Mrs. J. Lewis, Mrs. Barkley, Rayonante, Sensation, W. R. Church, Chenon de Léché, and Le Grand Dragon. Many of these have large, massive blooms, and are arranged, not in the usual formal method, but with flowers projecting out here and there throughout the group. Smaller varieties occupy the side stages of this house, and also the greenhouse.—J. S.

Chrysanthemums and Their Names.

Chrysanthemums are the speciality of this month. When groups of plants are arranged, it may be in the greenhouse, conservatory, or vinery, three or four pots deep, the names are often difficult to find when the wood tally that has done duty all the summer is sought for. To obviate this, a very simple means may be found in a card or paper label, with the name plainly written thereon, placed in such position that it is seen either above or immediately below the expanded flowers. Should the stakes be of a length allowing these cards being fixed in an incision at the top, the work of naming is simple in the extreme. If the stakes are of hazel, an incision could easily be made at any convenient height; but in these days bamboos are almost invariably employed, because of their greater durability and strength, and these are not so easily incised with an ordinary knife except at their upper extremity. To me there appears an opening for the inventor to provide either a metallic or white-faced card label that might be instantly adjusted by means of a clip. These might, in the case of standard sorts, be available for more than one year's use. A brass or steel wire holder similar to those employed on exhibition boxes and stands could easily be adapted to the purpose, when any kind of label that most conveniently comes within reach may be used.

Small luggage labels suggest themselves as being cheap, easily obtained, and most convenient for the purpose, the one all-important necessity being the adjustable holder that can be fixed to the stake at any given height. Without a name a Chrysanthemum loses in value and interest. After a summer's use of the ordinary deal label the name often becomes almost or entirely unintelligible to anyone save those in charge, who may have had daily opportunities to become familiar with names new or old.

The need is the more pressing when the collection of sorts is varied from year to year by the purchase and introduction of new ones raised and distributed by specialists. This necessity is so strongly felt that many gardeners, out of their own slender incomes and savings, invest in a few modern varieties where employers are so markedly indifferent to the demand of the times, and the need for even the smallest aspect of novelty, that they hold aloof from such desirable investment. There is probably no other plant of our greenhouses that creates so strong a desire for new kinds, and yet, how chary are some employers in supporting it!—W. S.

Hints to Chrysanthemum Judges.

The remarks I purpose making on judging Chrysanthemums are intended for those who are commencing the arduous duties for the first time during the present season. It is right that new blood, as it were, should be imported into the ranks of Chrysanthemum judges. Persons who have not previously acted as judges must of necessity feel some trepidation when making their first award, especially if the class is well filled with exhibits close in point of merit. Exhibits in some classes judge themselves; but when the competition is keen it is then that a good method of adjudicating is beneficial. Much more difficulty is experienced in finding the third prize stand than there is in selecting the first. This class of prize deserves as much attention as does the first, and should receive its due proportion. The enormous increase of varieties in the Japanese section alone requires the adoption of a quick, and, at the same time, a sure method of dealing out justice to exhibitors.

Prizes are generally offered for a specified number of blooms, and not for a stand collectively, irrespective of its number. Every bloom should be judged upon its individual merits, or why specify a certain number, like "Twelve Japanese, distinct"?

There are various methods adopted of arriving at a definite issue as to the relative merits of exhibits, and I contend that all judges should be able and willing to give the reason why stand B is better than D. It may not always be policy to do this, but when an exhibitor approaches a judge in a proper manner for future educational reasons, then the adjudicator would do well to give the information required. If a judge is able to give a reason for all his awards, then there is little reason generally to think a mistake has been made in the awards.

No one will deny that adjudicating on the many blooms placed before the judges is very much a matter of individual taste. For instance, one judge may consider the broad florets of some variety peculiar to that, represent higher culture than his colleagues will admit; while the latter may have a leaning to forms of Japanese varieties, for instance, that represent the closely incurving types which his partner does not so much admire.

There are two methods of judging in vogue—pointing and comparison. Many judges still stick to the latter plan. This system was, perhaps, feasible many years ago, when varieties were less numerous; but now we have such an enormous number of sorts, the comparison method does not do justice to individual characteristics. If two stands are composed of identical varieties, then nothing would be fairer than to compare the blooms individually; but when does such an instance occur?

Apart from the justice of the case, the comparison method entails much unnecessary labour, as well as loss of time. How can any set of judges carry in their mind's eye, as it were, the merits of a stand of twenty-four blooms, much less forty-eight or sixty, which number is becoming common, especially when there are fifteen competitors, assuming, of course, that one stand does not stand out infinitely superior to all others in this particular class? To me it seems a waste of time to carry a stand of blooms about the show room for the purpose of comparison.

Judges may as well attempt to carry a collection of vegetables or fruit for the same purpose! Some experts of this order of opinion select what they think is the best stand of blooms in a certain class, and place it in front of all others in competition with this selected one. Very often a better is found; the first must then be replaced, and the one preferred for the time being carried round, perhaps to be displaced by another. Surely this cannot be the easiest, quickest, and most accurate method of dealing with competitive exhibits.

For the benefit of the beginner I will briefly explain the comparison method. For instance, twelve blooms of any section are being dealt with. One stand, which is apparently the best, is selected and placed in front of another by one of the judges. The second judge takes up a position on one side of the stand. They commence generally at the left hand corner of both stands. No bloom in the back row of stand A is compared with that in a similar position in stand B. Individually, A is considered to be superior to B. The former then scores a point or two, perhaps more, even if they are quite diverse in type. The leaning to this particular type may weigh more heavily with one judge than another. In the next instance, the balance may be in the opposite direction. This is mentally noted as one point off A stand, and so on is the whole stand compared, and very likely the judges forget which stand has the balance before they get through it, and have to start afresh, owing to having nothing tangible to refer to.

Some judges have a weakness for giving equal prizes to stands close in point of merit. This is a doctrine that I strongly condemn; it is an easy way out of a difficulty. There is a first, and it should be found.

HOW TO JUDGE THE BLOOMS.

I ought now to give a few plain instructions how to proceed, as I have spoken so condemnably of the comparison method. In all well appointed shows the exhibits in one class are placed

together, or as near as possible, except under exceptional circumstances. The judges, having made themselves acquainted with the rules of the particular society they are acting for, for the time being, such as to the classification of certain varieties, or conditions which they have to carry out, remembering at all times they are not there to make laws, but to carry them out, even if they appear to be wrong, a walk round the room is then taken to obtain, as it were, the key bloom in each section. This cursory glance enables a judge to understand better the class of blooms he has to deal with at this particular exhibition. A mere glance at some of the competing stands is sufficient to know that they will not require closer scrutiny. Those that necessitate a further inspection are noted in some way peculiar to individual judges. If a second glance is not sufficient to settle the position of each, then the individual merit of each bloom is considered. The judges fix upon a maximum number of points, which is generally six, made

other point but this, it cannot then score a maximum number of points, owing to this deficiency. It seems superfluous to say that maximum means perfection, and that is indeed a rare occurrence to meet with. Instead of taking each bloom separately from left to right, beginning at the back row, I commence at the left hand end of the stand, taking the blooms in rows of three, upwards or downwards, it matters not, as long as the practice is the same throughout the whole show.

Some judges with a limited experience commence to point high; but as they proceed they so often find blooms of the same variety much superior to those to which they have given the maximum number of points to but a short time previously. Here, then, is an instance of the advantage of taking a quiet look round before commencing the awards to obtain the key bloom. The various points of excellence should be well studied, always bearing in mind that quality is of far more consequence than mere size.



MADAME G. HENRY.

AUSTRALIE.
MRS. W. MEASE.
Chrysanthemums.

MADAME CARNOT.

according to the key bloom noted previously. Now comes the question of allotting the points.

Of course, a beginner should have made himself acquainted with the properties contained in Chrysanthemum blooms of all sections, such as size, depth, solidity, breadth of petal, finish, freshness, form, and colour. Size is not determined by diameter alone; the depth should be taken into consideration. If a bloom has size, but lacks some other points, such as a want of freshness or density of colour, for its individuality, it cannot be called perfect, and cannot obtain the maximum number of points. Five does not perhaps do it justice; then five and a half should be given, and so on throughout the stand. Seldom, indeed, do we find maximum blooms. Some persons may think half points are ridiculous, much less quarter points. In my opinion, though, it is the only way of dealing justice accurately.

There is a strong tendency amongst exhibitors to stage blooms not fully expanded. If a bloom be perfect in every

Just one example of pointing, then I must conclude, as I have already occupied much space. The front row bloom is a full sized one of Mrs. T. W. Pockett, but is a trifle pale in colour; to this is given four points. The middle bloom is a perfect example in every way but size of Mrs. Barkley; to this is given five and a half points. The back row bloom is a full sized one of Mrs. J. Lewis, perfect in petal and "build," but showing a faint tinge of age on the lower florets. To this is also given five and a half points, making a total of fifteen points, and so on until all the rows are done. The points are then added up, and that having the highest number wins. Suppose two stands are equal in number of points—not a unique experience, certainly—the two stands then must be gone over again, this time starting from the opposite end; and if they total an equal number again, the arrangement of colour and staging of the blooms will decide the difference.—E. MOLYNEUX.

[This letter, and the one from Mr. Brotherston, should be compared.—Ed.]



Pear, Passe Colmar.

This is a Pear of medium size, with fine melting fruits, though their appearance is not very attractive. The tree forms either a good pyramid or bush, being particularly prolific on the latter, in warm sheltered gardens; but wherever the aspect of the garden is exposed, a wall should be given. The true season, when the fruits are at their best, is December, though they are also used in dessert a month earlier. The "Fruit Manual" says of it: "This is of Belgian origin, and is supposed to have been raised by M. Hardenpont, of Mons, in Hainault, in 1758, and has for many years been cultivated in Belgium under different names. It was first received in this country by R. Wilbraham, Esq., of Twickenham, and by him given to a person named Chapman, a market gardener at Brentford End, Isleworth, who cultivated it extensively, and attached his own name to it. The fruit was sold for 25s., and the trees for 21s. each."

Autumnal Strawberries in Cornwall.

It occurs to me that as I live on the north coast of Cornwall, on a heavy, though sandy, clay, and therefore under very different conditions with regard to climate, soil, and situation to those obtaining at Sproughton, Suffolk, my experience with the Perpetual Strawberries may be of some interest. I have had ample opportunities of comparing my Strawberries with my father's, and though my method of cultivation differs slightly, I think my results are equally satisfactory. I don't get quite such an abundant display of fruit as I saw at Sproughton in September last, but I get an astonishing quantity. On the whole they are of larger size, and, I should like to say, of better flavour; but on that point I am hardly an impartial judge; all the things in my garden taste better than other people's—to me. I grow my plants in rows (St. Joseph 1ft apart, St. Antoine 2ft apart), and I don't allow any runners at all. At Sproughton I think I am right in saying that runners are allowed the first year—to make the magic circles of your illustration—and not afterwards. I consider that by my method I arrive in the first year at the same position as Sproughton is in the second year, with the additional advantage of having my plants in orderly rows. This makes, it seems to me, the keeping down of runners and picking of fruit an easier matter, though, of course, it necessitates a larger original stock of plants.

I do not support the fruit above the leaves; they do better, in this climate, under their shelter. Slugs were a terrible nuisance, but a brood of very young ducks, turned out for a fortnight in spring, when the blossoms are just starting, will effect a complete cure, especially if the ground is gently Dutch-hoed once or twice in their presence; they do no harm to the Strawberries. My bed has lasted three years, and shows no sign of deterioration, but I am turning the cage into a hen run this year, which I consider should make a good "alternate crop." I grow St. Joseph and St. Antoine only, and I have grown the latter since it first came out. I bought originally six plants, one of which was an ordinary Royal Sovereign, and confined their attention at first to making runners. They did that well, and their numerous progeny have all been Perpetual. They are *more* Perpetual, with me, the older they get, but are very leafy, and the fruit is not much larger than a St. Joseph when it really gets under way. I had an accidental seedling, clearly crossed with Latest of All, a bed of which was next door, and this was quite Perpetual, large, and of excellent flavour; but it took such an extraordinary time ripening that I have not encouraged it. —P. H. FOSTER-MELLIAR.

Farmyard Manure.

The substance that goes by the name of farmyard manure, fold manure, dung, or muck, chiefly consists of (a) the material that was used as litter, usually straw, sometimes peat, fern, sawdust, &c.; (b) the food that passed through the animals in an undigested condition and has been voided in the solid form; and (c) the urine, which contains that part of the food which the animals digested but did not retain in their system. The urine also contains the waste of the tissues of the animal's body. The proportions of these parts will vary with circumstances. For instance, when it is the object of the farmer to break down as much straw as possible, a relatively large amount

of the farmyard manure will consist of litter, but where litter is used very sparingly—as in upland dairies—the manure will consist very largely of the solid and liquid excreta.

All food contains more or less water; even in such substances as grain or cake one-seventh or one-eighth, while in others, like turnips, nine-tenths is pure water. Neglecting this water, it may be said that for every 100lbs of food that an animal consumes, about 50lbs reappear in the dung or urine; the other 50lbs being burned up in its system, becoming gas or water, or being stored up in its body as bone, flesh, fat, hair, &c. A well-grown bullock or cow—weighing, say, 9cwt—will consume daily, if on full ration, about 24lb of absolutely dry food, as for example:—

56 lb. Roots (90 per cent. water)	..	..	=	5.6 lb. dry.
6 lb. Cake or Meal (12 per cent. water)	..	..	=	5.3 "
16 lb. Hay or Straw (16 per cent. water)	..	..	=	13.4 "

Total .. 24.3 lb. of dry matter

One half of this, say, 12lbs, will reappear as manure, and to this has to be added the whole of the dry matter in the litter, say, 10lbs, making the daily output of dry matter in farmyard manure 22lbs. Needless to say, it may be much more or much less, depending on the age and size of the animals, and on the way in which they are fed and littered. Ordinary farmyard manure is, of course, not dry; on the contrary, it contains about 75 per cent. of water. The daily output will therefore weigh not 22lbs but 88lbs, say 3cwt. Thus on a six months' keep the amount of farmyard manure yielded will be about 7 tons. This calculation applies to full-grown cattle; if the stock consists, as it generally does, of a fair proportion of younger animals, the output per head may be only 3 or 4 tons. It follows that on a farm with a mixed stock of 50 head, comprising 3 or 4 horses, enough dung should be produced during winter to give a dressing of 10 or 12 tons per acre to about 15–20 acres of land, or 3–4 acres less when allowance is made for loss during storage.

From the manurial point of view the three substances that are of most importance in the food are nitrogen, phosphoric acid, and potash. Although only one-half of the solid matter in the food reappears in the manure, at least three-quarters of the nitrogen, and nine-tenths of the phosphoric acid and potash, are voided. These proportions will be considerably reduced in the case of very young animals, and increased in the case of fattening cattle. Of the nitrogen that passes through an animal a large proportion finds its way out in the urine than in the solid excreta. The same is true of the potash, whereas the phosphoric acid—i.e., the phosphates—are chiefly voided in the dung. It will thus be seen that two of the three valuable elements of plant-food are more abundant in the liquids than in the solids of animal excreta, and, not only so, but pound for pound, the substances in the liquids are much more valuable for crops because they are much more readily available. The Rothamsted experiments have shown that much of the nitrogen in the solid part of dung can hardly be said to be of any use to plants, whereas the nitrogen of the liquid portion is almost as active and therefore as valuable as nitrate of soda or sulphate of ammonia.

In a ton of ordinary farmyard manure there is as much nitrogen, phosphate, and potash as in twelve or fifteen shillings' worth of artificial manure, and if a ton of dung is not usually valued at even half these figures this is chiefly because a large part of the three substances mentioned never becomes available, or is lost before crops can make use of it. True, a ton of farmyard manure is more expensive to handle than 2cwt or 3cwt of artificials, and this, of course, reduces its relative value; but, on the other hand, farmyard manure has a beneficial influence on crops just because it is a heavy bulky substance, so that these two considerations may be held roughly to balance or cancel each other.

Variation in the Quality and Character of Dung.

This is affected by the kind of food. Food rich in fertilising materials, especially nitrogen, produces rich dung. The kind of animal—horses produce dry, hot dung that ferments and acts quickly, but does not last long, whereas the dung of cattle and pigs is cold, slow-acting, and more durable. The dung of young stores and dairy cows is rather poor in all the important elements of plant-food, because, in the former case, these elements have, to a relatively large extent, gone to form bone and muscle, while in the latter case they have found their way into the milk. For instance, to quote the Rothamsted figures, while the excreta of a fattening bullock getting decorticated cotton cake will contain about 97 per cent. of the nitrogen, 96 per cent. of the phosphoric acid, and 99 per cent. of the potash present in the cake, the corresponding figures for a milk cow are only 87 per cent. for the nitrogen, 89 per cent. for the phosphoric acid, and 86 per cent. for the potash. This means that for every 3lbs of nitrogen, 4lbs of phosphoric acid, and 1lb of potash that the fattening bullock abstracts, the milk cow appropriates 13lbs, 11lbs, and 14lbs respectively. The age of the dung.—Rotten dung is richer and more active, provided it has been properly "made," than comparatively fresh

undecomposed material. The manner of storage.—Properly-managed dung is more valuable than that which has been mis-managed.

(To be continued.)

Book Notices.

An Introduction to Nature Study.¹

We cannot describe this as a very interesting book, or one likely to tempt beginners into the study of natural objects. The author has confined himself simply to the discussion of groups, and types from the groups, using simple language, it is true; but his style of writing, after all, is short and precise. It could have been freer, in more of the literary form, and still have been precise. One-half is devoted to plant life, the other half to animals. The author deals in separate chapters with Grasses, Ferns, Moulds and other Fungi, Algæ, and the high types of vegetation as well. The opening chapters deal with and explain elementary botany. In the animal section the rabbit is detailed as representing a typical mammal, and then follow birds, frogs and tadpoles, crustaceans, molluscs, and worms. As elementary treatises on biology are not very numerous, this one should be considerably used.

Culture of Hardy Tree and Bush Fruits.²

A simple little treatise on the various methods of propagating fruits, and how to cultivate them. Insect pests and fungoid diseases are briefly noticed, and chapters are devoted to fungicides and insecticides, discussing their properties, and how they ought to be used. We observe some hints on page 46 on how to save trees that have been barked all round. What is done is the insertion of connecting strands (shoots) between the two gnawed surfaces, which become joined once a callus forms, and so the sap can travel up. The booklet is illustrated, and is published at actual cost price.

Beautiful Flowering Trees and Shrubs.³

Now that gardeners in general are devoting greater attention to the consideration of ornamental trees and shrubs, and to the proper culture, grouping, and effective joint arrangement of the same, this little book will naturally find a place. The means of propagating trees and shrubs are discussed, but we think it would have been very much more to the interests both of publishers and readers to have omitted the hideous coloured plates, thirty-three of which are furnished, and to have devoted the space to greater amplification of some of the chapters, and this one on propagation especially. The author provides chapters on trees for towns, for street planting, trees with coloured foliage, trees for winter effects, how to group trees and shrubs, &c.; and the second half of the book is given over to a survey of trees and shrubs alphabetically arranged. This, from a cursory glance through, appears to be as complete as the generality of planters may require. Coniferæ are summarily included, and a chapter at the end is entitled "The Relationship of Trees and Shrubs," in which each is grouped with its allies in Natural Orders. The book extends to 152 pp., 8ins by 5½ins, with crimson binding. Had the coloured plates been left out, the price could have been reduced; but they may attract the inexperienced amateur.

Economic Zoology.⁴

The present volume consists primarily of a series of Reports to the Board of Agriculture, of Reports and letters to a variety of unofficial correspondents, and of Reports to the Foreign Office and to the Colonial Office, drawn up by Mr. F. V. Theobald during the years 1901-1902. These are the opening lines of the preface, which is written by the Director of the Natural History Museum, Prof. E. Ray Lankester. The introduction explains the classification of animals from the point of view of economic zoology, and we observe sections devoted to Animals Injurious to Horticulture, to Forestry, and to Agriculture. By "animals" it should be understood that the word is used in reference to what are usually called "insects" by the non-scientific people. To show the valuable character of this Report to gardeners, it will only be necessary to name a few of the subjects that are dealt with, as the injurious Tipulidæ, the Pigmy Potato Beetle, Potato Stem-borer, the Bud Moth, Ants (their destruction), Scale Insects, various Aphides, Beetles,

Wireworms, and Flies. The publication has an index, and extends to 192 pp., each nearly 10ins by 6ins, with some illustrations.

Gardening for All.⁵

The title of this book is ambiguous. It is a primer for cottagers, allotment holders, and amateur gardeners. The writer, however, is not in the least obscure, but makes his statements very plain, and assists them with numerous drawings. Vegetables, fruits, and flowers that are most generally cultivated are here considered, and, having had a long experience in drawing up careful reports in connection with the Experimental Garden at Droitwich, Mr. Udale knows how to summarise conclusions in the most condensed form for reference. The tables on artificial manures for the different crops, and how much of each is required, will therefore be of considerable service. The plans for cropping allotment and cottage gardens are another feature to which we draw attention, and there are others showing rotation cropping, and also the utilisation of ground for both fruit trees and vegetable crops. Pp. 177, 7ins by 4½ins.

Winter Flowering Stocks.

An effort made to sing the praises of the summer Ten Week Stock, because of its delightful fragrance, would be regarded as superfluous. Commonly cultivated as the Ten Week and other Stocks are in summer, they are hardly known in winter; yet there is the same fragrance, and the same flowers, though not, perhaps, so many colours obtainable. There are strains specially selected for winter purposes which anyone with a frame and greenhouse can cultivate, and certainly there ought to be as great a value in a well grown Stock as in that of a Primula or Cineraria, plants which so many, even with scant accommodation, strive to grow. I am not disposed to decry the Primula or the Cineraria, but I hold that the winter Stock should have as much favour, because, in addition to the charm of the Stock as a plant, there is the delightful fragrance which pervades the greenhouse or the dwelling room, unconsciously bringing reminders of the summer evenings spent among the flowers in the open garden. The greater charm of the Stock is embodied in the scent which it emits at eventide, a time when most scented flowers give of their best.

The varieties that have given us so much satisfaction are Sutton's Perfection, white and red: Princess Alice, and Winter White but to name these few necessarily leaves unmentioned a good many others probably of equal value. It suffices, however, for me to name those of which I have experience, leaving other readers to supplement them with those kinds that will surpass, or even equal them in all round merit. The last-named is an Intermediate Stock, dwarf of growth, and bearing short spikes of extra fine blooms; the others are of the Ten Week class, giving taller plants and greater freedom of spike, which are so convenient and useful for cutting.

Sown in June and July, and dealt with as one would do Cinerarias, they make good flowering plants from October onwards through the winter. They do not, fortunately, expend themselves in one display, but when cut other successive shoots and flowers appear, a trait which is of so much value in winter time. The earlier sown batch are stood in the open when they have advanced to a size justifying such a course. This sets up a sturdy and more consolidated growth than would obtain confined to the pit or frame; but in this, as in every other gardening matter, the ultimate purpose is that which should direct procedure from first to last.—W. S.

Aster puniceus pulcherrimus.

There is in cultivation a very fine garden Starwort called Aster puniceus pulcherrimus, which I have grown in my garden for a good many years, and which one finds is much admired, although I do not find it so useful for cutting as some others. The flowers are crowded together, so to speak, at the top of the stems, and when cut are not so conveniently arranged with others as one would like, especially if one desires to show the character of the flower—a desirable point with some of us in arranging these blooms. The arrangement of the flowers on the plants is almost pyramidal, while their colour is fairly well described as blush white, the petals being partially incurved. The stems of the plant are reddish, and it grows about 5ft high. It flowered this year early in October, but it generally comes into bloom in September. It seems to differ much from the typical Aster puniceus as figured, and to be greatly the superior of that plant. Of its origin I have no record.—S. A.

¹ "An introduction to Nature Study," by Ernest Stenhouse. Macmillan and Co., Ltd. 3s. 6d.

² "Culture of Hardy Tree and Bush Fruits," by E. Kemp Toogood, F.L.S. Toogood and Sons, Southampton. Price 6d.

³ "Beautiful Flowering Trees and Shrubs," by John Weathers. Simpkin, Marshall, Hamilton, Kent, and Co., Ltd. 6s.

⁴ "First Report on Economic Zoology," by F. V. Theobald, M.A. London: British Museum (Natural History), printed by order of the Trustees. Price 7s.

⁵ "Gardening for All," by James Udale, Chief Instructor in Horticulture for Worcestershire, with an Introduction by the Rt. Hon. Viscount Cobham. Third edition, price 1s. Stourbridge: Mark and Moody, "County Express" Offices. London: Simpkin.



Notes on Some of the Newer Exhibition Roses.

(The Rose Analysis.)

Mr. Mawley's Analyses of Roses, on which he spends so much ingenious labour, is always necessarily of great interest to rosarians and exhibitors, who are deeply indebted to him for the results of his task. Both matter and manner have nevertheless been subjected to criticism in past years, especially, perhaps, by my friend, the late C. J. Grahame. Personally I think the analysis is sound, as well as ingenious, and ought by this time to be pretty well understood, but has little value except for the National Metropolitan Show, owing to the early date at which that exhibition is generally held. I am surprised that Mr. Mawley states that early and late seasons were almost equally divided in the last eight years. He is a much better authority on that subject than I, but I should have said we had had no really early season since 1893.

Though, in common probably with most interested in the matter, I am surprised at the position occupied by some varieties in each of the tables, I will confine myself to some remarks upon such of the manners and customs of the newer varieties as I am able to speak of from personal observation.

Mr. Mawley includes under this head the Roses sent out in the four years, 1899-1902 inclusive. He seems to me to have here made an error by including Florence Pemberton H.T., which was only sent out this (1903) summer. A. Dickson and Sons themselves, as well as other trade growers, give its date as 1903. The Rose is given a very high position in the list as No. 4; but, I take it, no one can have seen a bloom of it except in Messrs. Dicksons' own stands, or growing anywhere but in their grounds, except as pot plants or "run out" buds.

It hardly seems necessary to comment upon the 1899 varieties, which ought to be fairly known by this time; so, beginning with H.P.'s, I will leave out of Mr. Mawley's list Bessie Brown, Mrs. Cocker, and Ulster, merely remarking that I have found the latter (Ulster), as is so often the case with weak and dwarf growers, do well and make a nice plant on a short standard of about eighteen inches high.

We come, then, to the first H.P. on Mr. Mawley's list, and third in order of merit after Mildred Grant and Bessie Brown (which was my own order), to Frau Karl Druschki; and those who have grown this Rose must cordially agree with the estimate of its merits which Mr. Mawley lays before us. I well remember the procession of white H.P.'s which he recounts, but I can recall Madame Noman before Madame Lacharme, and cannot say I "welcomed" either Mabel Morrison or White Baroness. There is no doubt we have now a far better white H.P. in Frau Karl Druschki than any we have had before; in growth it surpasses all the others except Margaret Dickson; in shape it especially and particularly excels, and in purity of colour it is at least equal, if not superior, to the best. Considering how purely white the perfect bloom is, it seems odd to notice that the bud, when it first "shows colour" (when the calyx turns back, exposing the cone of young petals before the first unfolds), is purely pink, thus testifying, as an embryologist would probably say, to a pink parent.

The next H.P. on the list, omitting Ulster, is Ben Cant, and one cannot help thinking how pleased the dear old man would have been with it, not only as a splendid Rose, but as one of several which have so soon testified to the skill of his sons in the difficult art of hybridisation. It is, I believe, a cross between Horace Vernet and Victor Hugo; and it is, as a cross, one of the most perfect yet sent out, for it seems to partake, almost equally, of the characteristics and general appearance of both parents, without "throwing back" or showing any trace of any other Rose. The season with me was against it, for though it has been almost washed out of our recollection since the "season"—i.e., the last week in June and first fortnight in July—that period was here absolutely rainless (a rare occurrence) and very hot, so that the crimson H.P.'s never got a chance to appear at their best. It appeared to me to be rather more like Victor Hugo than Horace Vernet, in opening too quickly under strong sunshine; but, on the other hand, to be stronger in growth and habit than either of them.

Coming next to the Hybrid Teas, we must all regret with Mr. Mawley the very general tendency to white among the new varieties. Alice Grahame, Alice Lindsell, Duchess of Portland, Edith Dombain, Florence Pemberton, Hélène Guillot, Mildred Grant, Perle von Godesberg, and Robert Scott, with, no doubt, some others, may be described as "whitish"—that is, practically white, to the ordinary cultivator, who is not likely to have many flowers at their strongest and best. However, this defect is certain to be familiar to the raisers, and I have no doubt they will

do their best to meet the demand for brighter colours. At the same time they should not forget that we are abundantly satisfied with the general great improvement in form which these magnificent new Hybrid Teas have given us; and we by no means desire that this should be lost, or even depreciated, for the sake of colour.

First, of undoubted right, on Mr. Mawley's list of H.T.'s comes Mildred Grant. If anyone wishes to know what this magnificent Rose is like, let him get a copy of A. Dickson and Sons' current Rose catalogue. On the cover is a print of Mildred Grant, which I have no hesitation in saying is the best coloured likeness of a Rose I have ever seen—a splendid work of art of a splendid Rose, though one would fancy it would have looked better still with a darker background. I have seen some pretty pictures of Roses, and a good many very bad ones; but this is not only beautiful; it is a likeness, so that one could name it with as much confidence as if it was the actual flower. Mildred Grant is the largest of Show Roses—that is, of those of good shape. The plant is more "robust" than "vigorous" in growth, the shoots not making much long growth without forming buds, which take some time to mature and grow and lengthen into the great flowers. The young bloom must be protected from rain, for—as is the case with some, if not all, other white Roses—a drop of water, if allowed to dry on the petals, will leave a red spot, and if allowed to become thoroughly wet, the unopened flower is apt to rot and gum, like all other Roses of pointed shape, but I have not found it a serious offender in this respect. The bloom should not be tied up too soon; and, indeed, the tying up of Roses for exhibition is an evil, hindering the perfect placing of the middle petals, but a necessary one very often owing to the baking the blooms have to withstand from an early hour in oven-like tents. The plant is a good autumnal bloomer, and from my limited experience I should say it does equally well as a dwarf or a standard; the leafstalks are very long and spreading, and my plants have not been attacked by mildew. It is certainly a characteristic and unique Rose, which is likely to rise a good many places in next year's general analysis. But, though in favourable circumstances it will undoubtedly come of the colour figured on Messrs. Dicksons' catalogue, as a general rule it must be looked on, for the ordinary cultivator, as practically white.—W. R. RAILLEM.

(To be continued.)

Millipedes and Centipedes.

Millipedes (Figs. 1 and 2) and centipedes (Fig. 3) belong to a group of the animal kingdom known as the Myriapoda. These animals are recognised by having legs on every ring or segment of the body. In the case of the millipedes there are two pairs of legs to each segment; in the centipedes, one pair only. It



FIG. 1.



FIG. 2.



FIG. 3.

Figs. 1 and 2, Millipedes (1, *Julus pulchellus*; 2, *Polydesmus complanatus*);
Fig. 3, Centipede (*Geophilus subterraneus*).

is important to notice these differences, as the millipedes are injurious and the centipedes are beneficial.

They are found in all manner of places, both in the field and in the garden, and are especially attracted by decaying vegetation, such as heaps of leaf mould, rotting stalks, &c. They are also found crawling about under the bark of trees and in the soil. The difference in structure is also accompanied by a difference in habits; centipedes are very active and are carnivorous, whereas millipedes are mostly herbivorous, and live upon sound and decaying vegetable matter. The millipedes have the mouth formed for chewing, there being powerful biting mandibles with which to devour the roots of plants. Centipedes are provided with poison claws. The bite of some centipedes in the tropics is very poisonous to man, but none are so in this country. Milli-

pedes are often known as "false wireworms," but they can easily be told from the true wireworm (Leaflet 10) by the great number of legs.

Description and Life History.

The female millipede (*Julus terrestris*) deposits her eggs from May to July in a nest made of pieces of earth fastened together with saliva; this nest is round in form, and has a small hole at the top through which the eggs are dropped. The eggs vary in number from sixty to 100. The hole is then stopped up, and the eggs mature in from ten to fourteen days. The young millipedes have only three pairs of legs, the others appear in groups by degrees. Growth in a millipede takes place by lengthening at the posterior end, the growth evidently taking place between the penultimate and last segments. Miss Ormerod states that millipedes lay their eggs from December to May, but as this does not agree with Sinclair's statements, the observations were probably made on different species.

The most injurious millipedes belong to the families Julidae and Polydesmidae. The latter (Fig. 2) are the flattened snake millipedes, the injurious species being shown in figure 2. The most troublesome millipede is *Julus pulchellus* (Fig. 1). This is nearly half an inch long, slender, about the thickness of a fair-sized pin, pale yellowish-pink in colour, with a double row of purple spots on it. *Julus terrestris*, another common species, is black and has a pointed tail. These Julidae feed upon all manner of roots. The smaller *Julus pulchellus* also eats into Potatoes and Lilies, often hollowing them out completely; the larger species, according to some observers, also feed upon snails, slugs, and some insects. The common species of flattened millipedes, *Polydesmus complanatus* (Fig. 2), is of a pale purplish-white to dull rosy tint, and is nearly an inch long, with the sides notched.

Centipedes, or Chilopoda, are beneficial, the food being composed of snails, slugs, and ground insects. Three of the commonest genera are *Lithobius*, *Geophilus* (Fig. 3) and *Scolopendra*. The eggs of *Lithobius* are laid from June to August; they are about the size of a number five shot, spheroidal in form, and covered with a sticky slime. The female, after laying an egg, rolls it about in the earth until it is all covered with soil and resembles a grain of earth. A small number only are laid by each female; and the males frequently devour the eggs before the female coats them with earth. In the other genera the number probably varies to some extent. *Geophilus* is said to lay its eggs in an earthen cell; *Scolopendra* to bring forth living young.

Methods of Prevention and Remedies against Millipedes.

These pests are frequently distributed with leaf mould, which should, therefore, be examined before being used, and if found to contain them should be mixed with lime. Their numbers in the field may also be lessened by broad-casting lime over the surface and working it into the soil. Soot and water, in the proportion of a handful of soot to half a gallon of water, is found to drive them away from the roots of garden plants for a time. They may also be trapped in numbers by placing pieces of Mangolds scooped out just under the ground near the plants they are attacking; they swarm over the baits and may then be collected and destroyed.

Another certain way of killing them on small areas is by injecting bisulphide of carbon into the soil. They may also be trapped by soaking decaying Cabbage leaves or decaying roots in Paris green and placing them about in gardens; the millipedes feed upon them and thus get poisoned.

The Board of Agriculture and Fisheries would be glad if recipients of this leaflet would make it known to others interested in the subject. Copies may be obtained free of charge and post free on application to the Secretary, Board of Agriculture and Fisheries, 4, Whitehall Place, London, S.W. Letters of application so addressed need not be stamped.

Societies.

R.H.S. Scientific Committee, Oct. 27th.

Present: Dr. M. T. Masters, F.R.S. (in the chair); Messrs. Odell, Saunders, Massee, Baker, and Worsdell; Drs. Rendle and Cooke; Revs. W. Wilks and G. Henslow, Hon. Sec.

Crassula Aitonii.—Mr. Odell showed specimens of this Karroo plant of S. Africa remarkable for bearing leaf buds in lieu of flowers, each consisting of two pairs of minute leaves.

Begonia bi-sexual.—Mr. Worsdell showed malformed flowers with abortive ovaries, bearing a tuft of stamens issuing from the base of the style.

Spinach failing.—Mrs. Killiek sent plants which were sown in August, and for three years consecutively at first came up well, but subsequently turned yellow. Spring sown Spinach never failed. It was suggested that if any grubs were present lime and soot should be used before sowing. Other growers had experienced the same thing. A deficiency of midday sunlight appeared to affect Spinach, as a

whole bed was a total failure in an enclosed place where the sun only shone upon it late in the day. Such causes did not apply.

Jasmine root hypertrophied.—Dr. Masters showed a specimen of root forming a large fungoid mass, but no trace of insect or fungus was present. Mr. Massee observed that ants will produce a very similar result on various plants.

Parsley leaf miner.—Mr. Wilks showed leaves infested by some grub, upon which Mr. Saunders reports as follows: "The Parsley leaves are attacked by the grubs of a fly, probably by those of the 'Celery fly' (*Tephritis onopordinis*), which they very much resemble; but the grubs of flies belonging to the same genus are often so much alike that it is impossible to distinguish between them. I have not heard of these grubs attacking Parsley before, but as both Celery and Parsnips are injured by them it is quite likely that Parsley may also be attacked, all these being umbellifers. The chrysalides are no doubt formed in the soil. If a crop has been badly injured by these grubs it should be pulled up and the ground well dressed with gas lime."

Injurious insects.—Miss Cope, F.R.H.S., inquired for information how to destroy certain insects. Mr. Saunders' report is adjoined: "The so-called insect sent by Miss Cope is one of the 'Centipedes' (*Geophilus longicornis*). I cannot say positively whether it is injurious to plants or not, my own views being that it is not, as it belongs to a carnivorous family, and is provided with a large pair of poison fangs, which would not be of any use to a creature fed on vegetable substances. When found at the roots of plants, as they often are, I believe, they have gone there to feed on insects which have been attacking the roots; but they have been so often accused of injuring plants, and have been found under very suspicious circumstances, that I do not feel justified in giving a definite verdict. It is possible that when their ordinary food becomes scarce, they may take to a vegetarian diet. The ordinary quick running centipede is undoubtedly of much service in gardens in killing small insects, slugs, &c. The green insect spoken of is probably one of the Cereopidae, the family to which the common froghopper belongs; but without seeing a specimen it is impossible to say positively. The best means of destroying this pest, if I am right, is to shake the plants over a sheet of pasteboard or tin which has been newly painted or tarred, so as to catch the insects when they jump off the plants."

Croydon Chrysanthemum, November 3rd and 4th.

The show held in the Public Hall, Croydon, on Tuesday and Wednesday of this week, though small, was of high merit. Though Chrysanthemums were the chief subjects, they were not the only products on view, for excellent Grapes and Apples, together with culinary vegetables, were represented.

At the time of our visit on Tuesday, the Mayor-elect opened the exhibition in the presence of the Society's officials and some of its patrons. He thought it was a mistake to hold Chrysanthemum shows earlier—that seemed to be a tendency; but he would prefer to hold them back till as late as possible, seeing we had Dahlias and Michaelmas Daisies to feast the eyes with, till the present time. The judges had given a very favourable report of the present exhibition, and of the management of it. The chief part of the work falls upon Mr. W. B. Beckett, who for fifteen years has been honorary secretary. This is a long and notable record, but Mr. Beckett never complains of overwork—rather is he proud of it, and keen for the progress of the Society.

We do not profess to have noticed every class, but the leading classes are suitably reported. To write of everything at an exhibition without discrimination is not in the interests of either exhibitors, societies, or floriculture.

Class 1 was for eighteen Japanese blooms and eighteen incurved, and here Mr. G. J. Hunt, gardener to Pantia Ralli, Esq., Ashted Park, Epsom, was first for the third time, thus winning the Challenge Cup outright. His blooms were wonderfully fine, and the set included both the premier Jap and incurved, viz., Miss Stopford (8ins or more in depth, and very handsome) and C. H. Curtis, at its best. Of the Japs we would also specially name F. S. Vallis (an enormous flower), Godfrey's Pride, Edith Smith, Madame P. Radaelli, George Lawrence, Miss Olive Miller, and Bessie Godfrey. The best finished incurveds were Globe d'Or, Duchess of Fife, Mrs. C. Crooks, Lady Isobel, and Hanwell Glory. Mr. C. J. Salter, from Reigate, was a good second, but his flowers appeared to be not so heavy or so strong. Nevertheless, he staged splendid samples of Bessie Godfrey (a gem), General Hutton, W. R. Church, W. A. Etherington, and F. S. Vallis. His incurveds were very pure in colour and fairly even and smooth, C. H. Curtis, Annie Hills, Hanwell Glory, and Empress being very pleasing. Third of three competitors came Mr. F. Bible, gardener to H.R.H. Prince Hatzfeldt, Draycot Park, Chippenham, who was very strong, and the class must have demanded keen scrutiny. His Bessie Godfrey was charming, and so were Mrs. Vallis, Madame P. Radaelli, Sensation, and Captain Percy Scott. The incurveds were clear and of good size. The names might have been written on stouter cards and been brought forward a little.

Mr. W. Collins, of Engadine, had the only exhibit in class 2, for a group of Chrysanthemums. For a semi-circular group of foliage and flowering plants (class 19), Mr. C. Perrett was first, and Mr. H. Dyer second. For six plants of Gloire de Lorraine;

Mr. G. Lewry, from Duppas Hill, was an easy first, and Mr. J. King second.

OPEN CLASSES.—For a group of Chrysanthemums in pots (class 4), arranged in the orthodox circular fashion, Mr. W. Hollins, Engadine, Park Hill Road, led; Mr. E. Puxted was second; and Mr. W. A. Cook, from Shirley Park, was third. For eighteen Japs in twelve varieties, Mr. G. Halsey, from Riddings Court, Caterham Valley, stood first with a fine set, his best being Exmouth Crimson, Mrs. R. Cadbury, Madame Chenon de Léché, J. R. Upton, and Mrs. Mease. Mr. C. Lane, of Caterham Valley, came second with very fair flowers; and Mr. J. King, The Red House, Bickley, was third, out of four.

For the dozen incurved blooms in nine kinds, Mr. C. Lane led with neat flowers; Mr. J. King was second, and Mr. G. Halsey third.

Mr. C. Lane was leader in class 7, for ten blooms shown in two vases. He staged Mrs. Mease and W. R. Church. The second place fell to Mr. G. Halsey, with Mrs. Mease and Mrs. G. Mileham. Mr. F. Bible was hero again third, with Mrs. Vallis and Australie.

For nine foliage plants (class 5), Mr. C. Lane was first, and Mr. J. King second.

In Division 2, class 29, Mr. Norman Wrightson, Elgin Road, Croydon, was premier for the ten blooms in vases, having quite a number of varieties. Mr. G. Mills, Hazel Dell, Croydon, was second; Mr. F. Wells, Albert Road, and R. E. Mason, Vincent Road, equal third, out of seven entries.

For three vases of pompons (class 32) the lead was with Mr. W. Philpot, of Church Street, and J. Pittman was second, the blooms being very good. For the two vases, the only entry was from J. R. Filce. For six Japs (class 30) Mr. F. Wells led, and had in his set a splendid bloom of W. Duckham. Mrs. Green, Lynton, Temple Road, was winner for the decorated centre-piece.

The special prize of half a guinea, given by N. Waterall, Esq., for a bloom of King Edward Chrysanthemum, was won by Mr. A. Shipway, gardener to R. C. Forster, Esq., The Grange, Sutton.

FRUITS AND VEGETABLES made a bright and creditable display. The chief exhibitors of fruits were Messrs. W. Lintott, W. Jones, W. A. Cook, G. Lewry, G. Johnson, O. Jeal, C. Perrett, and Ernest Phillips. For vegetables the chief winners were G. Snellins, F. J. Davis, C. Perrett, and J. Friend, each with collections. Messrs. Lintott, G. Prebble, Snelling and Edwards had the best dishes of round and kidney Potatoes, and J. R. Filce won for Coleworts. Celery and Onions were only fair; Parsnips were scarred; but Turnips were generally good.

For two bunches of white Grapes Mr. W. Taylor beat Mr. W. Lintott; and for two blacks Mr. Lintott led against Mr. J. Friend, of Godstone; and Mr. W. Taylor third.

NON-COMPETITIVE.—An exhibit of two dozen Japs and incurved, from Mr. W. E. Mills, gardener to Frank Lloyd, Esq., Coombe House, Croydon, was highly commended. His Lord Ludlow was very fine, and also the Bessie Godfrey.

Messrs. John Peed and Son, West Norwood, staged both flowers and Apples, the latter being good fruits of the leading sorts.

Mr. Thos. Butcher showed floral decorations, and T. Pascall and Sons, S. Norwood Pottery, staged their wares.

Mr. Norman Davis was forward with exceedingly handsome blooms, including Madame Paolo Radaelli, Mrs. F. W. Vallis, Mrs. K. R. Knight, H. Perkins, Miss M. Ware, F. W. Vallis, Gen. Hutton, Mrs. Mease, and Madame Carnot.

A card of commendation was awarded to Mr. W. A. Cook, gardener to Col. Simpson, Shirley House, for a dish of Catillac Pears.

National Chrysanthemum, October 26th.

At the meeting of the Floral Committee held on this date, at the Essex Hall, Strand, a goodly number of new varieties were submitted for the consideration of the committee. The change from the semi-darkness of the late Aquarium to the clear roof light of the Essex Hall is much appreciated by committee and exhibitors. Mr. D. B. Crane occupied the chair, and there was a good attendance. First-class certificates of merit were awarded to

Incurved, Mrs. J. P. Bryce: a large white variety, of excellent petal and symmetry, something in the way of Duchess of Fife, but said to be quite distinct from it. From Mr. W. Godfrey, nurseryman, Exmouth.

Japanese, Maude du Cros: pale yellow, with sulphur white reverse. Six blooms of this variety were shown, all even, large, full, deep, and attractive, the long and fairly broad florets curving somewhat at the tips. From Mr. T. Bullimore, The Gardens, Canons Park, Stanmore.

Incurved, Miss E. Holding, having a pale rosy purple base, with a silvery reverse, but little of the surface colouring can be seen, the incurved florets folding over and forming a compact cone. From Mr. W. Seward, The Firs, Hanwell.

Mr. Godfrey staged also some blooms of Jap Exmouth Rival, brilliantly coloured, and most telling. The difficulty appears

to be to get it deep enough for exhibition size; commended. He also had Col. Wetheral, a broad petalled Jap of a deep, bright, golden yellow colour, and of good promise. *Incurved*, Devonshire Hero, a bright, deep yellow variety, not sufficiently developed, and which the committee wished to see again; also Wiltrid H. Godfrey, a bright orange chestnut incurved Jap, with amber reverse.

Mr. Thomas Mudd, The Gardens, Thorneywood, Northampton, had Thorneywood, a promising exhibition Jap, colour pink, suffused with delicate lilac, the broad florets curving at the points; this the committee wished to see again. Mr. D. H. Fairweather, The Gardens, Bifrons Park, Canterbury, sent Jap, Mr. John Reeve, deep pink, suffused with lilac and delicate purple, with a silvery reverse, a broad petalled flower of promise; and Mrs. John Reeve, blush white, somewhat conical shaped, a little rough as shown. Mr. Geo. Mileham, Emlyn House Gardens, Leatherhead, sent Jap, Emlyn Gem, orange and ruby salmon, with amber reverse; and Harry Greenfield, bright deep chestnut crimson, with broad florets slightly reflexing.

Mr. T. Bullimore also staged Philippe du Cros, pale orange red, with amber reverse, a large incurving Jap; and Denise du Cros, said to be a reflexed sport from the preceding, and of a dull orange chestnut colour. Mr. George Carpenter, West Hall, Byfleet, had Miss Florence Eva White, an incurved Jap of good petal and substance; and Miss E. Fisher, a broad petalled blush white variety, creamy and lemon in the centre. Mr. J. C. Geiselbrecht, Beechdale, Lee, S.E. (George Judge, gardener), sent Mrs. George Judge, a broad petalled delicate pinkish rose variety, bright in colour, and decidedly promising. Mr. W. Seward, Hanwell, had incurved Mrs. E. Leggett, lilac, with silvery reverse, broad petalled. Mr. C. Penfold, The Gardens, Leigh Park, Havant, had a bold and striking white named Lady Pearce, pure in colour, broad petalled, and likely to make a very acceptable addition to the white Japs. Mr. C. J. Ellis, Warren House Gardens, Stanmore, sent Mrs. Bischoffsheim, having orange salmon and pale ruby basal petals, with rich deep gold centre, very showy, a variety likely to improve with cultivation.—R. DEAN.

The Royal Botanic.

The Royal Botanic Society of London have again succeeded in obtaining a remarkably beautiful display of Chrysanthemums in the conservatory at their gardens in Regent's Park. The general practice of the society is to grow, not for purposes of show, but for conservatory decoration. But a desire for something of the nature of an annual exhibition of Chrysanthemums was expressed about six or seven years ago, and consequently the society has paid special attention to the cultivation of these flowers, and have so far improved their collection that there has been a manifest advance every year. The collection is grown exclusively in the gardens of the society, whose officers have made it a special object to secure new varieties as they have come out, and to keep their collection well up to date in this respect. Attention may fitly be directed to the excellent arrangement of the conservatory, not only as regards provision for the healthy growth of the plants, but for purposes of display. The conventional method of packing a large number of blooms close together is here avoided. The Chrysanthemums are lightly arranged between foliage plants, chiefly Palms and Ferns, and also Asparagus. The plants thrive better, and the effect upon the eye is excellent; each individual colour is seen to the best advantage.

Beckenham Horticultural.

On Friday, October 23, Mr. F. W. Shrivell, F.L.S., lectured to a large audience on "Experiments with Manures on Bush and Other Fruits," as carried on at the Hadlow (Golden Green) Experimental Farm. Strawberries first claimed attention; the best results were obtained by the use of a light dressing of dung, twenty-five loads to the acre, supplemented with 4cwt of superphosphate and 2cwt of nitrate of soda. Currants, Gooseberries, Apples, Damsons, and Cob Nuts were treated on instructively. The lecturer held out no hopes of a cure for the Black Currant mite, which has evidently "come to stay." As a remedy for the Gooseberry caterpillar, syringing with a solution of softsoap, 8lbs to 100gals of water, was recommended. Cob Nuts manured with superphosphate, potash, and nitrate of soda were said to have realised better prices than those grown without them, the Nuts having a better appearance by reason of a longer "cupule" or beard. Spraying was remarked upon for fruit trees, Potatoes, &c., the lecturer suggesting that societies should possess machines that could be let out on hire to members for a small sum. He also urged the importance of care in the matter of weight and measure of ingredients for spraying. Some well grown Begonias Gloire de Lorraine were contributed by Mr. Cole, and some remarkably fine Ailsa Craig Onions by Mr. Webster; to each was awarded the society's certificate of merit. At the close, Mr. Shrivell was heartily thanked for his able and instructive lecture.—T. C.

United Horticultural Benefit and Provident.

The seventeenth anniversary dinner was held in London on October 27th ult., when Mr. Peter Barr presided over 111 members and visitors. Having honoured the loyal toasts, Mr. Barr proposed success to the society. He observed that the membership was now 1,040; what would the work be when the numbers amounted to 10,000? He thought it probable that the society might some day have rooms of their own in the City [why not in the new horticultural hall?—Ed.], with a large staff of clerks doing the work. He had gone through the rules, and thought some of them obscured; but having brought the matter forward, these rules were now in process of being re-written. Mr. Barr, as a nurseryman, had never known before that this branch of the horticultural army of workers were entitled to join the society. In order that the nursery employes at Long Ditton might have the matter brought before them, he had caused the rules to be sent to the foreman there, and had asked him to explain them to the other workers. Mr. Barr suggested that a leaflet be prepared and sent to the various seedsmen and nurserymen throughout the country, stating the advantages derivable, and that nursery employes were eligible. The single-handed gardeners might be reached through clergymen, and other leaflets might be sent direct to park superintendents and head gardeners. Having had statistics prepared, Mr. Barr was able to say that 948 members were in England, eighteen in Wales, seventeen in Scotland, twelve in Ireland, and one each in South Africa and Germany, and four in America.

He urged the officials to work Scotland more, even though "Sandy's" weakness was to have societies of his own. The chairman went on to say that nowhere during his travels had he found any similar self-help society. However, as the English gardening papers are read in various parts of America and Australia, the idea of a self-help society will be carried far abroad. And the women gardeners are equally eligible with men to become members of the "United."

To this toast Mr. James Hudson, the treasurer, responded. He did not think the Scots were likely to form a gardeners' self-help society, as had been hinted. They were too canny for that, and preferred to join one that had money. The "United" (the good ship "United," as he called it) had sailed since 1865, and though progress was for a long time slow, its advance was now ensured. The officers had it well equipped, and managed it to the interests of all, and the sum of £22,000 (invested capital) as ballast, would keep it steady. Mr. Hudson was glad to know that gardeners, especially young gardeners, were making use of its advantages, and he urged them more and more to give it consideration. It had been a common excuse with some that they had never heard of it. All he could say was that if that were so, they did not read the gardening papers. He wished them to compare the "United Horticultural" with the Hearts of Oak, the Oddfellows, and others.

In a well considered and admirably delivered speech Mr. A. J. Brown, of the School of Handicrafts, Chertsey, introduced a toast to the Honorary and Life Members. He had attended the annual meeting in the spring, and was much surprised to find only a very few members there. It were well if benefit members would take greater interest themselves, and he felt sure that honorary members would not be a-wanting. Mr. Sherwood, who founded the Good Samaritan Fund, was an exemplary honorary member, and that act of generosity was a grand testimonial to a good man.

The remaining toasts having been given, the meeting dispersed at ten o'clock.

Bristol Gardeners'.

"Hardy Fruit Culture, Past and Present," was the subject of a lecture given before the Bristol Gardeners' Association on Thursday last, the lecturer being Mr. J. Basham, jun., representing the Newport Gardeners' Society. A goodly number of the Bristol gardening fraternity availed themselves of the opportunity to hear such an authority on hardy fruits. Mr. Basham, sen., occupied a seat on the platform, and was



Pear, Passe Colmar. (See page 422.)

cordially welcomed by his fellow gardeners of Bristol. Prizes for six culinary Apples were awarded to, first, Mr. J. B. Brain (gardener, Mr. Atwell); second, Lady Cave (gardener, Mr. Poole); third, Mr. G. A. Wills (gardener, Mr. Barwell); and an extra one to Mr. Gilbert Howes (gardener, Mr. White). A certificate of merit was also awarded to Mr. Gilbert Howes for three *Odontoglossum grande*. Mr. Basham staged a collection of a score or more dishes of Apples, which were much admired and appreciated. The chairman for the evening was Mr. E. H. Poole.—H. K.

Newport (Mon.) Gardeners'.

The usual meeting of the above association was held on Wednesday last, when Mr. J. Reece, of Wonastow Court, Monmouth, read a very interesting paper on "Leaves and Their Functions." Mr. Reece, in his paper, said that leaves played a very important part in decoration, and were of many forms, the simplest being found amongst Mosses, varying in colour from shades of green to white, yellow and red. Small leaves were produced in the greatest profusion. Leaves acted as lungs to the plant, absorbing carbonic acid and water from the atmosphere, and exhaling oxygen, the under surface of the leaf doing most of the work, and the sap supplied by the roots being elaborated by the leaves and returned to the stem. Mr. Reece illustrated his paper by diagrams of the cells of leaves, also of the different forms of the veins, also of the leaves showing the various shapes. A discussion followed, in which Messrs. Woodward, Wiggins, Daniels, Taylor, Powell, and others took part. Mr. Reece was accorded a very hearty vote of thanks for his able and interesting paper. Mr. J. Duff presided over a good attendance.—J. PEGLER, Hon. Sec.

Birmingham Gardeners' Association.

"Florists and Floriculture of the Past Fifty Years" was the title of a very interesting lecture on the 19th inst., by Mr. Richard Dean, V.M.H. Mr. Dean, in his customary graphic style, gave a review of the principal florists of the past half century, coupled with the special productions of each. A report of a lecture on this subject appeared in the Journal a year ago, extending to two or three issues.

Cardiff Gardeners.

The second meeting of session took place at the Grand Hotel, on Tuesday, October 20, Mr. H. R. Farmer presiding over a large attendance. Mr. F. W. E. Shrivell, F.L.S., delivered a lecture entitled "The Use of Chemical and other Manures in Horticulture," illustrated with lime-light slides. The best thanks of the meeting was accorded Mr. Shrivell for his most interesting lecture, to which he briefly responded. It was announced that on November 10, Mr. H. R. Farmer, Cardiff Castle Gardens, would deliver a lecture on "Vines."—J. J.



Fruit Forcing.

CUCUMBERS.—Autumn fruiting plants are now in full bearing, and having plenty of stamina in them, and not being overcropped, will continue to bear good fruit a considerable time longer. It is also necessary to remove the fruit as soon as it becomes a usable size, and all deformed fruit when seen, as these needlessly weaken the plants. Attend to the plants once or twice a week for the removal of bad leaves, stopping irregular growths and cutting out superfluous, keeping the foliage moderately thin. If mildew appear dust the affected parts with flowers of sulphur, or form this into a paste with skim milk, and brush a little on the hot-water pipes. The fumes given off act against red spider and white fly, but aphides and thrips should be subdued with vapourisation of nicotine essence, or fumigation with good tobacco paper, or the advertised substances, which are generally safe and thoroughly effectual. Winter fruiting plants are far the most difficult to manage; the great thing is to get them well established and furnished with sturdy growths and thick, leathery leaves, letting the shoots advance well up the trellis before stopping them, training the growths evenly, and not more closely than to allow of the foliage being well exposed to light. Stop the side growths after a few good leaves are made, and the shoots issuing from the wood left will show plenty of fruit, and such may be stopped one or two joints beyond it. This will secure foliage for accelerating root action and the proper nourishment of the fruit. To insure the fruit swelling it is sometimes necessary to have recourse to fertilising the flower; but allow few or no male blossoms or tendrils, removing them as fast as they appear, for they only weaken the plants. Add fresh soil to the ridges or hillocks as the roots protrude, and be careful not to over-water, affording a supply only when needed. The water or liquid manure applied should be warm to the mean temperature of the house.

PEACHES AND NECTARINES: EARLIEST FORCED TREES IN POTS.—For securing very early fruit, the trees are unquestionably best grown in standard form in pots, and the stems varying in height, so that they will accord with the incline of the structure, and thus have the heads well up to the light. The very early varieties do well under this method of culture, as from the pinching they have blossom buds on the young wood, and these are not liable to drop as are those on the first made wood of the previous year through over-development. A three-quarter span-roof house, facing south, provided with top and front ventilation, and four rows of hot water pipes, two along the front and two next the path on the front side of the house, cannot be bettered for early forcing, the back wall being utilised by growing Tomatoes against it; and when the Peach trees are withdrawn, as they may be after the weather becomes settled in June, the front of the house can be occupied with Tomato plants grown in pots for the purpose.—ST. ALBANS.

Kitchen Garden.

ASPARAGUS BEDS.—Now that the yellow stems of the plants indicate that their work is done for the season, the work of cutting them down closely to the ground may be proceeded with. The growth of weeds, too, in many cases has recently been free and luxuriant. Owing to the continued wet it has been difficult to check them, but now in clearing the beds they should also be dealt with. Many of them can be pulled up, but some which are deep rooting and of a perennial character will require forking out. Having cleared the beds a mulching ought to be spread over alike to protect and enrich the ground. Short, decayed manure, mixed with a little leaf soil, is suitable, spreading it not more than 3in thick.

POTATOES.—The stock of Potatoes now under cover should be looked over, so that the best only may be selected and preserved. In doing this it is necessary to keep a strict look-out for diseased tubers, as the presence of these will quickly cause more to be affected. Small tubers at the same time should be picked out, the best of them being used for mixing with the food of poultry or pigs. It is important to keep the tubers intended for table use protected from frost and covered from light. Store them in any dry, frost proof structure, and cover with straw, dry mats, or bags.

SEED POTATOES.—It is desirable to make an early selection of these, taking especial care to save only sound, untainted specimens, which shall be of good shape and medium in size. The preservation of them is a matter of importance, arranging them thinly in shallow boxes, which may be placed in a light and notably cool position, but safe from frost. Seed tubers

are also kept in bags. The method of storing them in shallow boxes is adapted chiefly for early varieties which are sprouted before planting.

CABBAGES.—The old stumps which are worth retaining should be cleared now of large and yellow leaves. Also rake the ground beneath the plants clear of rubbish. Take the opportunity of hoeing between young plants in dry weather.

PREPARING MANURE FOR MUSHROOMS.—A sufficient amount of short horse droppings should be collected and kept dry, preventing them heating until enough are at hand for all to ferment at once. The material may then be thrown together in a heap and encouraged to ferment, which it will do if duly moist, in the course of a day or two. On becoming hot turn the heap over, placing the inside out and the outside in. If this is repeated once more the manure should then be in a right condition, having lost its fiery state, to form into a bed.

CELERY.—During the continued wet which has lately been prevalent it has been difficult to finish the earthing of the late crops. Under drier conditions the work may be done. Pack the soil well round the plants, and when finishing make the sides steep, so as to carry off the wet away from the plants. The Celery fly has been very destructive in some places this wet summer and autumn. In the worst cases all the green tissue of the foliage has been completely eaten up. A check should be given the pest when the first larvæ are seen at work in the leaves. With a little patience and persistence in crushing them they can be kept down at first.

SPINACH.—Make a final thinning of the autumn sown Spinach. Plants short and sturdy, and not crowded, will stand the winter best. Keep the ground clear of weeds.

BEET.—Beet roots not yet out of the ground should be lifted forthwith, dried, and then stored in sand or ashes in a cool shed.

ENDIVE.—The driest opportunities possible should be chosen for covering full grown plants of Endive for blanching. Pots inverted over and the drainage hole covered with a slate to exclude light will prove, perhaps, to be better than placing a slate directly on the plants.—EAST KENT.

Weather Notes.

Cyclone in Berks.

On Sunday last, October 25, we were visited with what one might call an "American" cyclone. It came up from the south-west, across the Coombe Hills, with terrific force just before 8 p.m. One could hear numerous trees snapping and falling, but owing to the darkness I could not see what damage was being done. After it became quiet I ventured out with a light to see that the glass was safe. That, excepting the conservatory, was all right, but the latter had part of its roof stripped off. It was the park, however, that had the full force of the storm. Trees are down everywhere, Elms, Oaks, Ash, Limes, and Cedars. It is impossible to give the correct number of trees that have fallen. The local paper gives the number of 267. I think, when cut out, there will be even more than that. Considerable damage was done also to house property in the village; while the Bath Road was rendered impassable by trees and fallen telegraphic wires. This storm seemed to put the last straw upon gardening after such a bad season.—JOHN H. SIMMONS, Foreman, Barton Court, Kintbury, Berks.

Rainfall at Camp Hill, Woolton, Lancs.

It may be of interest to some of your readers to know the amount of rain which has fallen in this district during October. We have registered here for the month 7.09ins. The rainfall for October, 1902, was 3.73ins, being 3.36ins less than this year. The heaviest was on Tuesday, the 27th, the rain guage registering 1.42ins; on the 7th, 0.60ins; and on the 6th and 12th, 0.48 fell on each of those days. The total rainfall for the present year up to October 31 is 34.32ins.

	Rainfall, 1903.	Days with out rain.
January	2.14 inches	14
February	2.09 "	11
March	3.47 "	9
April	1.70 "	17
May	3.48 "	11
June	1.76 "	22
July	3.30 "	16
August	4.16 "	5
September	5.13 "	10
October.. .. .	7.09 "	2
	<hr/> 34.32	<hr/> 117

304 days of the year : 117 days without rain ; 187 days with rain.

—J. STONEY, The Gardens, Camp Hill, Wootton, Lancashire.

The Month of October.

In this part of the kingdom the almost continuous falling of rain was unprecedented in the memory of anyone living. During the month there were only two days on which rain did

not fall, and in consequence these were the only days on which any corn was cut or gathered. And during the month about 8ins of rain fell. This is phenomenal, especially so for October, which, as a rule, is not a wet month. The foliage keeps green. Still, many trees are partly denuded, as much by the stress of recent wind storms as by natural causes. The temperature, upon the whole, has been high, with the result that growth in soft wooded subjects was unchecked. Outside things, such as Dahlias, are still flowering as if in the month of August.—D. C., Hamilton, N.B.

Sussex Weather.

The total rainfall at Abbots Leigh, Hayward's Heath, for the past month was 7.21ins, which is 3.61ins above the average. The heaviest fall was 1in on the 12th; rain fell on twenty-seven days. The amount of rain this month has been exceeded twice in our record of twenty-three years, viz., October, 1880, with 8.23ins, and 1891 with 7.83 ins; but it has broken the record as to the number of days on which rain fell. The maximum temperature was 67deg on the 3rd, the minimum 33deg on the 24th and 31st. Mean maximum, 59deg; mean minimum, 46.01deg; mean temperature, 52.50deg—3.85deg above the average. "Too wet for anything" has been the general verdict on October. Much work in arrears, and vegetation not in a good state to resist hard frost should it occur.—R. I.

Temple House Gardens, Great Marlow, Bucks.

The register of rainfall here for the month of October, 1903, was 8.83ins, and for October, 1902, 1.79ins. During the past month rain fell on twenty-nine days; quite a deluge during the night of the 27th and early morning of the 28th, when 1.26ins was registered. There were four foggy mornings, viz., on the 1st, 8th, 24th, and 31st; thunder on the 1st and 22nd; heavy thunder and hailstorm on the evening of the 25th; thunder on the 26th; and heavy hailstorm on the 15th. There were rough winds on the 5th, 6th, and 16th, and a gale on the 25th. The maximum temperature for October, 1903, was 66deg on the 1st, and the minimum 32deg on the 30th. The maximum temperature for October, 1902, was 64deg on the 10th, and the minimum 30deg on the 18th. We are situated close to the river Thames, 105ft 9ins above sea level, and our average yearly rainfall is 27.50ins.—G. G.

Heavy Rainfall at Alton, Hants.

The rainfall as registered at Rotherfield Park for October has been exceptionally heavy. Total for the month, 11.37ins, more than double the quantity that has fallen in any previous month of the present abnormally wet year. It rained every day except three, viz., 13th, 17th, and 30th. Our heaviest fall was on the 11th, when 1.90in fell. Over an inch also fell on the 27th, when we registered 1.21in. For the ten months ending October 31 the total rainfall here has been 42.54ins.—WILMOT H. YATES, Rotherfield Park Gardens, Alton, Hants.

This short weather note, being of more than ordinary interest, I venture to send it for the Journal. Rainfall for the month of October: Total of 10.17ins, falling on twenty-seven days. The greatest fall was on the 11th, 1.54in.—E. PLATT, The Gardens, Borden Wood, Liphook, Hants.

Trade Catalogues Received.

Frank Cant and Co., Braiswick Rose Gardens, Colchester.—*Roses*.
Clibrans, Altrincham.—*Trees and Shrubs, Roses and Fruits*.
John Cowan, Gateacre Nurseries, Liverpool.—*"Harefield Hall" collection of Orchids, duplicates sold*.
Dammann and Co., Naples, Italy.—*Novelties for 1904*.
Dicksons, Chester.—*Trees and Shrubs*.
M. Herb, Via Trivio, 24-36, Naples.—*Novelties for 1904*.
Harlan P. Kelsey, Boston, Mass., U.S.A.—*Hardy Rhododendrons*.
Little and Ballantyne, Carlisle.—*Trees, forest and ornamental*.
J. Peed and Son, West Norwood, London, S.E.—*Chrysanthemums*.

ILLUSTRATED CATALOGUES OF BUILDINGS.

Boulton and Paul, Ltd., Rose Lane Works, Norwich.
W. Duncan Tucker, Lawrence Road, Tottenham, London, N.
Foster and Pearson, Beeston, Notts.
Portable Building Co., Ltd., Fleetwood.
J. Weeks and Co., Ltd., Fernshaw Road, King's Road, Chelsea, S.W.

COMMUNICATIONS RECEIVED.—F. W. C., B. Cowan, Board of Agriculture, G. H. H., W. H. S., R. C., J. U., Weichel and Co., M. W., S. H., J. B. S., A. Reader (the letter had been overlooked), J. S., C. J., Librarian of the Smithsonian Institute, Washington, U.S.A., R. C., A. F.-M. (we relied on a Glasgow representative), R. H. and Co., James Gray, Thames Bank Iron Co., E. M., H. D., Sec. Board of Agriculture, A. O'N., M. A., W. G., S. and S., W. H. Y., G. A., W. B., and S.

THE BEE-KEEPER.

Hive Roofs.

It is most important that hive roofs should be watertight, and they should receive particular attention at this time of the year. It is highly probable that more colonies are ruined and more weaklings come through the winter caused by the dampness of quilts than from starvation. Evidence of leakages in roofs may be obtained by examining the quilts after a wet spell, and any hives which are suspected should have the roof removed some fine warm day, and the upper quilts, if wet or damp, replaced by dry and comfortable ones. This, if done carefully, need not disturb the bees. Dryness is essential to prosperity. If the damp penetrates through cracks it may be stopped by putting pitch along them, and then covering with a sheet of brown paper, over which rub a heated iron. The heat melts the pitch, and it runs and fills all crevices splendidly, and is very inexpensive. Putty, after exposure to the weather, very often dries and falls out, and sawdust and glue paste for the purpose is seldom satisfactory. If the roof is past the pitch method of renovation it must be covered with sheet zinc, turning the edges under and nailing on the under side. The reason why nailing on the under side is advisable is to avoid nail holes on the upper side, which, no matter how small they may be, allow the rain to percolate by what is termed capillary attraction.

Of course, damp may arise through the kind of wood used in the construction of the hive, some being more porous than others, and consequently less suitable for hive making. There is, however, no doubt that all hives should be painted once a year. One of the few deadly diseases to which bees are liable, viz., dysentery, is often caused by dampness and lack of sufficient ventilation. The latter is ensured by having cones or holes in the roof back and front, which will allow a circulation of air around the quilts, thus permitting the noxious vapours generated by the bees to pass from the hive. If there is no upward ventilation the quilts become damp, and not only do the quilts become wet, but the inside walls of the hive, and for this reason, therefore, it would be quite wrong to prevent ventilation, like some apiarists do under the misapprehension that they are thereby retaining the heat.—E. E., Sandbach.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
October.										
Sunday ...18	W.N.W.	deg. 49.2	deg. 46.9	deg. 52.1	deg. 43.8	Ins. 0.11	deg. 52.2	deg. 55.0	deg. 56.3	deg. 34.3
Monday ...19	S.E.	50.5	49.7	56.0	45.8	0.04	52.3	54.7	56.1	40.5
Tuesday...20	S.S.E.	53.7	51.9	55.9	50.3	0.03	53.3	54.5	56.0	46.8
Wed'sday 21	W.N.W.	54.4	52.5	55.5	50.2	0.25	53.5	54.7	55.8	42.5
Thursday 22	S.S.W.	51.6	50.6	59.1	42.2	0.23	52.3	54.5	55.6	34.0
Friday ...23	W.S.W.	47.7	45.8	52.8	41.0	—	51.7	54.2	55.5	33.8
Saturday 24	S.E.	43.7	42.4	55.6	35.0	0.17	50.3	53.7	55.3	27.5
MEANS ...		50.1	48.5	55.3	44.0	Total. 0.83	52.2	54.5	55.8	37.1

There is no change, simply a continuation of the dull, wet weather we have been recording for several weeks past.

Sunday ...25	S.E.	deg. 52.0	deg. 51.3	deg. 54.3	deg. 44.0	Ins. 0.18	deg. 51.2	deg. 53.2	deg. 55.1	deg. 34.8
Monday ...26	S.S.W.	deg. 57.5	deg. 53.5	deg. 58.1	deg. 51.8	0.51	deg. 52.2	deg. 53.2	deg. 54.9	deg. 43.8
Tuesday ...27	S.S.E.	deg. 48.4	deg. 47.8	deg. 57.3	deg. 43.3	0.36	deg. 52.2	deg. 53.3	deg. 54.8	deg. 33.5
Wednesday 28	S.W.	deg. 48.5	deg. 47.6	deg. 55.6	deg. 48.2	0.02	deg. 52.9	deg. 53.3	deg. 54.8	deg. 48.5
Thursday 29	S.S.W.	deg. 54.7	deg. 52.0	deg. 58.6	deg. 44.0	—	deg. 51.7	deg. 53.3	deg. 54.5	deg. 32.5
Friday ...30	S.S.W.	deg. 50.7	deg. 47.9	deg. 55.8	deg. 46.8	—	deg. 51.8	deg. 53.2	deg. 54.5	deg. 36.5
Saturday 31	S.W.	deg. 42.5	deg. 41.6	deg. 54.3	deg. 36.0	0.29	deg. 50.0	deg. 53.1	deg. 54.4	deg. 27.5
MEANS ...		50.6	48.8	56.3	44.9	Total. 1.36	51.7	53.2	54.7	36.7

The weather has again been dull, with rain on five days.



* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.

INSECT: IS IT INJURIOUS TO CYCLAMENS? (H. K.).—The insect is one of the Springtails, evidently *Achorntes purpurascens*, and is probably induced by the leaf mould or other decayed matter in the compost. It is to a certain extent injurious, but commonly does not exist in such number as to cause material injury, though in hotbeds it sometimes causes considerable harm by rasping the stems of seedling Cucumbers and other plants. Lightly dusting air-slaked lime in the soil is a good means of riddance.

PROPAGATING WHITE LAPAGERIA (A Reader).—White *Lapageria* (*L. rosea alba*) is usually propagated by layers. Strong, firm shoots, when layered and covered with soil, producing fine young plants, the operation may be performed in the autumn or spring, rooting being facilitated by notching below a joint and thus secured and covered with soil. It may also be raised from seed sown, soon after being gathered, in a sandy peat soil, and kept in a moderate heat. Where *Lapagerias* are raised in quantity, beds of suitable soil are prepared, the parent plants placed in them, and the shoots pegged down. A moist, medium temperature is maintained, and when young plants are sufficiently established they are detached and potted.

ROOTS OF VINES DECAYED (Grapes, Onward).—The roots are certainly quite dead and in a state of decay, also infested by the mycelium of some fungus, but whether that of *Agaricus* (or, properly, *Armillaria mellea*) meleus, as you suppose, we are unable to say, in the absence of ascophores or other definite form of fructification. There is no remedy but the fire for roots so far advanced in decay, and unless the Vines have some living roots, it would be advisable to uproot them altogether and plant new Vines in entirely freshly made borders. The cause is, no doubt, a bad condition of the border, it being of too close, too rich, or unsuitable materials—hence sodden and sour, the drainage, perhaps, not having been efficient.

GRAFTING ORANGE TREE (X. Y. Z.).—It is too late to graft, as the stock will be at rest. The best time is when the sap is in motion, say in spring up to August, side grafting being practised, the scion having its lower end placed in a phial of water to keep the leaves fresh until the union is complete. The usual mode of propagation is by budding performed in August, young plants being placed under a handglass after the operation. In the course of a month the union will be complete, when loosen the ligature and remove the top of the handlight. The budded plants should be headed down in spring, three inches above the buds, and if the pots are plunged in a hotbed the buds will start and make shoots two feet or more long by August, when they should be gradually hardened off.

SHOOTS OF YEW DISCOLOURED (Reay, Surrey).—The shoots are affected by the disease known as "Yew-leaf redness," which is produced by a fungus closely allied to, if not identical with, that causing "Spruce-leaf redness" (*Hysterium macrosporum*). Its presence may be detected by the leaves of the previous year's shoots turning brown in May, or possibly not till autumn, and by the invariable occurrence of abundant mycelia in the leaves even before they become brown. Leaves which change colour in spring reveal the commencement of the formation of perithecia in July of the same year, and these ripen next spring in April and May. At that time they are present on the two-year-old shoots. This is the case in a wet season, when, owing to the humid atmosphere, the disease is of rapid development. Under drier conditions, on the other hand, the leaves on two-year-old shoots do not become brown till October, and the formation of perithecia begins on three-year-old leaves in June of the following year, the spores ripening in the succeeding March or April. On the two-year-old leaves there are some blackish pustules, now somewhat rounded, but ultimately they become elongated, yet not so long and straight in the case of affected Spruce leaves. The perithecia are produced on the under side of the leaves. The whole of the leaves on an affected shoot are usually brown—that is, the two-year and one-year-old leaves—but the "fruits" only appear on the two-year-old leaves. The only repressive measure known is to cut off the affected growths and burn them, which should be done by or before March.

POINSETTIAS DEVOID OF BRACTS (H. K.).—As the beauty of *Euphorbia* (syn. *Poinsettia*) *pulcherrima* resides in the bracts with which the flowers are surrounded, it is very tantalising to have the plants practically bractless, as in your specimens. The defect usually arises from defective maturity of the wood or its solidification during formation, and this appears the only reason for the condition of your plants, the dull, wet season not favouring the sturdy, short jointed, well solidified growth so essential for the production of fine heads of bracts. As the object is to produce a large terminal head of bracts, the plants should be grown as sturdily as possible, an intermediate house answering well in ordinary seasons; but in such as the recent summer the plants are liable to become softer than usual, and in consequence would be liable to suffer from an ordinary fumigation that under a harder condition of the growth would not be injuriously affected. The plants will not bear a low temperature in autumn, the result being invariably the loss of either the lower leaves or bracts. When the bracts appear, more heat and some manure water may be applied to expand them. Retaining the foliage in good condition throughout the season is one of the main provisions for securing the full development of the flower heads. Sudden changes of temperature in either direction must be avoided, and the plants exposed to plenty of light and full sunshine, except when it is very strong, in summer.

TEA AND HYBRID TEA ROSES PLANTED OUT IN GREENHOUSE (Rosa).—The first thing to be attended to is the drainage. A foot depth of rubble should be provided, and the bottom of this fall to a drain having proper incline and outlet. The roughest material, half-brick size, should be placed at bottom, and diminishing to road metal size at top; over this a layer of old mortar rubbish, two or three inches thick, may be placed. Thus water cannot stagnate around the roots of the plants, and they will receive the air or warmth the soil needs and is essential for health. The soil in which Roses succeed well is composed of two parts of stiff, turfy loam, broken up but not sifted, two parts manure (preferably road gatherings laid by for a season, or the remains of a hotbed, not too far decomposed, and to which is added a third part of its bulk of road scrapings), and one part charred earth or sand. This compost should be thrown up in a heap in autumn, and turned two or three times during winter, and a little air-slaked lime and soot scattered throughout to destroy or drive out worms and grubs. It should be used to a depth of two feet and made tolerably firm, always making up the border when the material is in good working order—neither too wet nor too dry. The Roses may then be planted, early in spring being a good time, just before or when they are starting into growth. We presume you intend the plants as climbers, of which *Alister Stella Gray* (N.), light yellow; *Belle Lyonnaise* (T.), deep canary yellow, tinted with rose; *Bouquet d'Or* (N.), deep yellow, coppery centre; *Céline Forestier* (N.), pale yellow, deep yellow centre; *Cheshunt Hybrid* (T.), cherry carmine; *Lamarque* (N.), lemon yellow; *Gloire de Dijon* (T.), yellow, shaded with pink; *L'Idéal* (N.), yellow, with metallic tints of copper and gold; *Madame Berard* (T.), clear light rose; *Maréchal Niel* (T.), deep yellow; *Reine Marie Henriette* (T.), bright crimson; *Solfaterre* (N.), sulphur yellow; and *William Allen Richardson* (N.), orange yellow; *Climbing Devoniensis* (T.), creamy white, tinted rose; *Climbing Niphetos* (T.), white or pale yellow; *Climbing Perle des Jardins* (T.), straw yellow; and *Climbing La France* (H.T.), rose lilac, are good. From the foregoing you may select according to taste for colour and requirements, the plants not being nearer than 3ft. and are better 4½ft distance apart, given full run of rafter and trellis, not further from glass than 1ft. The plants, all points considered, are, perhaps, best on seedling Briar. If you require dwarf plants for growing as bushes or pyramids, you cannot do better than select from the tables given in our columns of October 29, page 392.

NAMES OF FRUITS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (F. J. R.).—1, Scarlet Nonpareil; 2, Egremont Russet. (P. P.).—Pear Catillac. (F. N.).—1, Beauty of Kent; 2, Mabbot's Pearmain; 3, Margil.

NAMES OF PLANTS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.* (W. A. B.).—1, *Lælia Digbyana purpurata*. (T. O.).—1, *Dracæna Massangeana*; 2, *D. Goldiæna*; 3, *Polygonum vaccinifolium*. (G. C.).—*A Bilbergia* sp. (T. X.).—1, *Tecoma radicans*; 2, *Cupressus filifera gracilis*; 3, *Phyllostachys nitida*.

Covent Garden Market.—November 4th.

Average Wholesale Prices.—Vegetables.

	s.	d.	s.	d.		s.	d.	s.	d.
Artichokes, green, doz.	2	6	to	3	6	Horseradish, bunch ...	1	9	to 2 0
„ Jerusalem, sieve	1	6		0	0	Leeks, bunch	0	2	0 2½
Batavia, doz.	2	0		0	0	Lettuce, Cabbage, doz.	0	6	0 0
Beet, red, doz.	0	6		0	0	Mushrooms, per lb. ...	1	6	0 0
Brussels Sprouts, ½-sieve	2	0		2	6	Onions, Spanish, case	5	0	0 0

Average Wholesale Prices.—Plants in Pots

Most of the undermentioned plants are sold in 48 and 32-sized pots

	s. d.	s. d.		s. d.	s. d.
Adiantum euneatum, 48's, per doz.	6 0	to 7 0	Eulalia japonica ...	12 0	to 15 0
" 32's, "	12 0	15 0	Ferns, var., doz. ...	4 0	18 0
Aralias, doz. (48's) ...	6 0	8 0	" small, 100 ...	10 0	16 0
Araucaria, doz. ...	21 0	24 0	Ficus elastica, doz. ...	10 0	15 0
Aspidistra, doz. ...	24 0	36 0	Foliage plants, var, each	1 0	5 0
Asparagus, 48's ...	10 0	12 0	Grevilleas, 48's, doz. ...	5 0	0 0
Bouvardias, ...	6 0	8 0	Lycopodiums, doz. ...	3 0	0 0
Chrysanthemums, lifted	6 0	9 0	Marguerite Daisy, doz.	8 0	9 0
" disbudded specimens	1 0	2 6	Myrtles, doz. ...	6 0	9 6
Crotons, doz. ...	18 0	30 0	Palms, in var., doz. ...	15 0	30 0
Cyperus alternifolius			" specimens	21 0	63 0
doz. ...	4 0	5 0	Pandanus Veitchi, 48's,		
Dracæna, var., doz. ...	18 0	21 0	doz. ...	36 0	48 0
" viridis, doz. ...	8 0	12 0	Shrubs, in pots ...	4 0	6 0
			Solanums ...	8 0	10 0

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, Canadian Baldwin, per brl.	18 0	to 20 0	Nuts, Cob, per lb ...	0 5½	to 0 6
" Greenings, "	20 0	24 0	" Walnuts, per bag	7 6	8 0
" Nova Scotia			Oranges, case ...	12 0	15 0
Gravensteins			Grapes, Alicante, lb. ...	0 10	1 3
per brl. ...	18 0	20 0	" Colman ...	0 10	1 6
" Ribstons, brl. ...	24 0	27 0	" Hamburg ...	1 0	1 6
Bananas—			Pears, Comice, ½-case	12 0	13 0
Canary, finest X large,			" Winter Seekle, "	12 0	0 0
per bun. ...	13 0	14 0	" Calabash ...	12 0	0 0
" No. 1's ex., "	10 6	11 0	Pines, St. Michael's	3 0	4 0
" Ordinary, "	0 0	9 0	Plums, Californian,		
Cranberries ... per case	10 6	12 0	Black, 4 bks.,		
Figs, Italian, 12's, 15's,			per case ...	10 0	0 0
per doz. ...	1 6	1 9	" Golden Drops, 4		
" 24's, "	2 6	3 0	bks., per case	14 0	0 0
Lemons, ease ...	10 0	15 0	" Silver Prunes, 4		
" Malaga, per case	19 0	21 0	bks., per case	11 0	0 0
" Naples, 420's, "	27 0	30 0	Pomegranates, Valeneia		
			120's	8 0	0 0

Average Wholesale Prices.—Cut Flowers.

	s. d.	s. d.		s. d.	s. d.
Bouvardia, pink, white,			Oreids, Cyripediums		
and red, per bun. ...	5 0	to 6 0	per doz.	2 6	to 3 0
Carnations, pink Joliffe,			" Dendrobiums "	0 0	0 0
per doz. bun. ...	15 0	18 0	" Dendrobium Pha-		
" pink, Franco, "	15 0	18 0	lanopsis, per doz.	2 6	3 0
" red, Winter Cheer,			" Odontoglossums, "	3 0	4 0
per doz. bun. ...	15 0	18 0	Pelargonium, white,		
" white, Deutsche			per doz. bun. ...	4 0	5 0
Braun, doz. bun. ...	12 0	15 0	Roses, Bride's maid, doz.	1 6	2 6
" Duchess of Fife, "	15 0	18 0	" Marshal Niel, "	0 0	0 0
" Uriah Pike, crimson,			" Mermetts, doz. ...	2 0	3 0
son, doz. bun. ...	12 0	15 0	" Niphetos, doz. ...	1 6	2 0
Carnations, American			" ex. fine, doz.	0 0	2 6
varieties, cut long—			" Perle des Jardins,		
Mrs. T. Lawson, bright			per doz. ...	1 6	2 6
pink, per doz. ...	2 6	3 0	" Sunrise, per doz. ...	2 0	2 6
Royalty, deep pink, "	2 6	3 0	" Sunsets, per doz. ...	1 6	2 0
Cream of Pinks, sil-			" Safrano, English, dz	0 0	0 0
very pink, doz. ...	2 6	3 0	Stephanotis, 72 pips ...	2 6	3 0
Dazzler, scarlet, doz.	2 6	3 0	Tuberose, per doz. ...	0 0	0 4
Cape Gooseberries, per			Violets, English, single		
doz. bun. ...	6 0	8 0	per doz. bun. ...	1 0	1 6
Chrysanthemums—			" English, double,		
White, yellow, pink,			per doz. bun. ...	3 0	4 0
bronze, doz. blooms	1 0	2 0			
White, yellow, pink,					
bronze, specimen					
blooms, per doz. ...	2 6	4 0			
White, yellow, pink,					
bronze, specimen					
blooms, bunches ...	3 0	6 0			
Geranium, double scar-					
let, per doz. bnchs.	4 0	5 0			
" White, "	4 0	5 0			
Lilium Harrisii, per					
doz. blooms ...	3 6	4 0			
" lancifolium al-					
bum, per doz. blms.	1 6	2 0			
Lilium lancifolium ru-					
brum, doz. blooms	2 6	3 0			
Lily of Valley, special,					
per doz. bunches ...	15 0	18 0			
" Best, doz. bun. ...	10 0	12 0			
" Ordinary, dz. bun.	8 0	9 0			
Orchids, Cattleyas, doz.	10 0	12 0			
" Cattleyas, Harri-					
soni, per doz. ...	5 0	6 0			

Trade Note.**Messrs. W. Bull and Sons.**

Messrs. William Bull and Sons, new plant, seed, and bulb merchants, of King's Road, Chelsea, have appointed Mr. George H. Sage, late head gardener to the Most Hon. Marquess Camden, at Bayham Abbey, Lamberhurst, as one of their representatives.

**A New Departure.**

Lord Onslow, our new Minister of Agriculture, has a novel scheme in hand. On paper it looks remarkably well—it may be some years before he can speak of its actual practical value. We have the Board of Agriculture at Whitehall. To many it is only a name; to many more it is not even a name, as they have no idea that such a thing exists, much less do they know anything of its functions. Now this may seem rather a sweeping statement, but, nevertheless, it is the perfect truth. Take an average agricultural district with a mixed farming population. By that we mean a district where large farms and small holdings are pretty fairly divided. The small holdings are in the hands of men who have risen from the ranks of those who have actually followed the plough—the best men who have seen service (active) under the large farmers, and there saved money to enable them to start on their own account. Now, in the case of the large farmer we find he is probably a member of the County Chamber, an active spirit on the committee of the County Show, almost without exception a member of the "Royal," or some kindred society, or of both; a subscriber to at least one agricultural paper pure and simple, and a daily reader of some good county paper with an agricultural side. He receives most, if not all, of the little leaflets published by the Board, and is also in receipt of all the latest agricultural pamphlets and journals, English and foreign, which abound.

Now look at the small man. He gets a weekly paper. There may be a paragraph touching on farm work in his own immediate neighbourhood. There will be some instances, especially at this season of the year, of gigantic Potato yields sold at abnormal prices. The facts would find no admission into the paper were they not sensational. If he lives in or near a village he may see in the reading room a copy of an agricultural paper. (We know several village rooms where one is not taken.) If he lives in an isolated place, he sees nothing. He knew of the "Royal" in past days, because occasionally it visited some large town in his neighbourhood: now it is a thing of the past, for Park Royal is quite out of his reach. He knows nothing of his privileges under the Fertiliser and Feeding Stuffs Act. He may occasionally know something about the Milk Act if he should unfortunately be caught selling milk deficient in butter fat. That is brought home to him very forcibly before a magistrate, but he has no idea how to get at the amount of butter fat for himself. He is the man who ought to have every leaflet that is printed. They should be distributed by hand, with a personal request that they be read and studied, and a clever colporteur might easily add a few words of explanation when he found the subject a little beyond the ken of the receiver.

Up to now there has been a great difficulty in getting into touch with these small farmers—men who are really of such immense value to the country. They are shy and unapproachable, slow of speech, and very unwilling to allow, or admit, their ignorance with regard to the scientific side of their profession. They are the class who most need teaching and who get the least, simply because the authorities do not know what they want, and do not know how to get at that knowledge.

It cannot be done from headquarters. It will have to be ascertained locally, and to this end it is proposed to have all over the country, men versed in matters agricultural, who will from time to time communicate with Lord Onslow and his staff, and keep them posted up as to the wants of the agriculturists generally. The men appointed must be such as have the full confidence of their neighbours, and will be in a position to know intimately those facts to which it is desirable to call attention. There will be a very nice discrimination needed in the choice of these men; and if the right men are chosen they will be very powerful for good.

Now, we hardly like to take upon ourselves to say what men should be chosen; but we think, without offence, we should suggest that no land agents are on the roll. A land agent is difficult to class. He is supposed only to have at heart the interests of his employer, and he is looked upon with more or less suspicion by the farmer. It is with him so many difficulties occur, and at the best of times and with the best men we can only describe the situation as one of "armed neutrality."

These, then, are not the men to whom a struggling farmer would come in any difficulty. We want educated men, genial men, and men with very judicial, even temperaments. A popular landlord might be a most valuable auxiliary, and we know of one or two the very men. Then there are some large tenant farmers we could mention, only the difficulty with them is that their hands are already very full; it is, however, just such men who can generally make time to do a little more work, especially if it be work for the good of others.

Lord Onslow through his secretary, Sir T. H. Elliott, makes several suggestions as to the class of information that should be gathered and laid before the Board at Whitehall, and we think we cannot do better than quote them verbatim.

I.—PRODUCTION.

I. Losses arising from the use of unsuitable, defective, or worthless seed.

II. Difficulties in connection with the selection and use of fertilisers, and complaints as to their quality or failure.

III. Losses arising from the attacks of insects, and diseases affecting crops.

IV. The suppression of weeds.

V. The partial or complete failure of crops from exceptional causes.

VI. The growth of new crops and new methods of cultivation.

VII. The practical value of new implements and machinery.

VIII. Difficulties in the treatment of orchards and garden produce.

IX. The deterioration and possible improvement of pasture.

X. New and special methods of dairying and new descriptions of produce.

XI. Difficulties in the breeding and feeding of live stock.

XII. Complaints as to the quality of feeding stuffs.

XIII. New descriptions of feeding stuffs.

II.—DISTRIBUTION.

XIV. Inadequacy of railway and other facilities for transit.

XV. Complaints as to railway rates.

XVI. Difficulties at markets with regard to tolls and accommodation (including weighbridges).

XVII. Loss of markets at home or abroad, and exceptional decline in prices.

XVIII. Methods of marketing and requirements of purchasers as to quality, packages, &c.

We ask, Can this list be improved? It is as nearly perfect as anything human can be. Whether all these recommendations can be carried into effect is another story. They cover such a wide range of subject there seems to be something to fit every case.

Take the first two instances. What help a clever farmer might give to a less educated neighbour by suggestions as to best place from where to procure suitable, honest seed. These men often spend their money on what is perfectly useless, simply because they become the easy prey to the first unscrupulous dealer they meet, and in case of failure he has a thousand specious arguments, by which he accounts for that failure; anyone or anything is to blame except the rubbish he sold.

In the second case, the happy-go-lucky admixture of manures is something too extraordinary to contemplate. Manure is manure, quite irrespective of the nature of the soil, which it may or may not suit. At this ignorance we need not be surprised, for the best of us are only just learning the A B C of the art.

Take, again, No. IX. It is sad to say, but only too true, that no land is more robbed than pasture land, and no land responds better to generous treatment. The small farmer, cow keeper, and the like needs to get very ounce of good out of his pasture, for, as a rule, he pays very dearly for it. (N.B.—There are others beside the small farmer who neglect their grass land.)

No. X. has been partly approached by the travelling dairymaid, but still in many neighbourhoods we find yet

only butter and milk as the dairy produce, nothing in the way of soft cheeses, which need only to be known to be appreciated. Under No. XI., we think, would come hints as to the better breeding of the dairy cow; that is, with a view to a greater milk capacity. We fancy that few everyday cows average 440 gals per annum, and that Professor Long says, is less than it should be. From our acquaintance with the working man's cow, we see there is much room for improvement. Does he ever consider the question of the necessity of using a bull the product of the best milker of the herd? A bull is a bull, if he has any sort of size or quality; we might say size without quality, often.

XV. suggests another feature. What poor man has any chance of combatting an excessive railway rate? In this case he does want a friend at court just to show what his rights are and what he can fairly insist on. We feel acutely in this neighbourhood (Doncaster) on the subject of transport facilities, and the long promised light railway is still, we fear, in the far future.

No. XVIII. People have yet much to learn as to grading and sorting. We heard of Barley, the produce of a labourer's two or three acres, going off to-day to the buyer just as it came from the machine tail. It does not require the gift of prophecy to predict that in about two or three days' time that old man will come to us asking for advice, as the corn merchant is inclined to throw up the lot. Another old man was grumbling sadly yesterday because he might not send off Potatoes just touched. He could not, or would not, see that before those Potatoes got to the consumer there would be considerably more disease than was desirable. We give this scheme our hearty welcome, and only hope it may fall into the hands of good men who will make it go.

Work on the Home Farm.

There is nothing of an agreeable nature to chronicle this week, for the rainy weather continues, and the whole country is a perfect slough of despond. The corn remaining in the fields may be written off as lost, for neither grain nor straw can now be of any value except as manure.

The work of the past week has been two days Potato lifting, and the other four wasted. Even the lighter soils are too wet for drilling with Wheat, even if the weather were fit to turn horses and men out in. On one day we had a thunderstorm and rain, the weight of which we have only once seen equalled.

A neighbour who sold a quantity of Potatoes for forward delivery is sorting them and getting them away. They are Up-to-Dates, and about one-third are diseased, and they are getting worse in the pie. As soon as the Potatoes are all up, no doubt farmers will make a great effort to put some Wheat in on the Potato land. If the land could be sown unploughed the work would proceed better, as the seed might be sown broadcast and harrowed in; but there are unfortunately so many Potatoes left in the soil that a careful ploughing is a necessity. There is one comfort; Wheat may be sown very late on a Potato fallow, so we have another month yet. There is one thing we must again impress on our readers, viz., the necessity of sowing dry seed. Where the land is very wet it is inadvisable to sow very bold, well filled Wheat. Small, immature, but dry seed is safe for sowing on sodden land. It would pay to gently kiln-dry seed Wheat which is in bad condition.

As may be imagined, sheep on Turnips are in a very dirty state; but, as a fact, they have been taken off to the grass a good deal lately, as there has been a labour difficulty about getting the roots trimmed and cut for them, in addition to the badness of the lair.

We have seen one heap of Mangolds stored. The owner seemed pleased at having beaten his neighbours, but we question whether the roots were ripe for putting away. It has been too wet for big Mangolds, but they may swell a great deal in two or three weeks yet, and as the crop is much below the average we should certainly give them a chance to do so. It is easy to write like this, however, when we have too many other irons in the fire. Very few cattle have been brought up, but a good many fat and half fat ones have gone to market, for farmers want money badly. The result of full markets has been a very bad trade, and butchers are getting good cattle at their own price.

WIRRAL AND BIRKENHEAD AGRICULTURAL SOCIETY (INCORPORATED).—In consequence of complaint having been made respecting the charge for admission to the horse ring enclosure during the society's show, the council has now decided that visitors to the next show, which will take place on June 14, 15, and 16, 1904, will be admitted to a portion of the ring enclosure free of charge.

PLANTING SEASON



PAULS' ROYAL NURSERIES

WALTHAM CROSS, HERTS.

12 miles from London. South Entrance four minutes' walk from Waltham Cross Station; West Entrance three minutes' walk from Theobald's Grove; both Stations on the Great Eastern Railway.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Gold Medals in 1903 from Royal Horticultural and Royal Botanic Societies.

FRUIT TREES for the Orchard, Garden, and Forcing House. Hogg Memorial Medal, 1901.

HARDY TREES for Streets, Parks, and General Planting. Silver Medal from Royal Agricultural Society of England.

SHRUBS, both Evergreen and Deciduous.

CLIMBING PLANTS, Hardy and Greenhouse.

RHODODENDRONS, CAMELLIAS, & AZALEAS.

HERBACEOUS PLANTS in great variety.

BULBS and SEEDS, and all Garden Sundries.

PRICE LISTS ON APPLICATION. INSPECTION INVITED. Upwards of 1000 Medals, Prizes, and other Awards at leading Exhibitions during the past 42 years.

SOLE POSTAL ADDRESS—

WM. PAUL & SON,
WALTHAM CROSS, HERTS.

Rose Growers by Appointment to His Majesty the King.

CHERRIES—A SPECIALITY!

Awarded Silver Banksian and Silver Gilt Knightian Medals for Collections by R. H. S.

Our collection is complete (over 50 varieties). Thousands to select from, very strong and well rooted. Standards from 12/-, 15/-, 18/- doz.; Dwarf Maidens, three and more shoots, 9/-, 12/- doz.; Dwarf Trained, 2/-, 2/6 and 3/6 each; Dwarfs, two-year heads, suitable for pyramids, 10/-, 12/- and 18/- doz.

LIST FREE ON APPLICATION.

W. RAY & CO., Nurserymen, TEYNHAM, KENT

GRAPE VINES in POTS

Extra Strong Fruiting and Planting Canes
in all Leading Varieties.

FIGS IN POTS

All Leading Sorts.
Bushes and Fan-trained for Walls.

DICKSONS Nurseries CHESTER

1500,000 BULBS.

Spanish Iris, Yellow, White, and Blue	7/6 per 1000.
Crocus, all colors	5/6 per 1000.
Sir Watkin Narcissus	5/6 per 100.
Horsefieldii	5/6 per 100.
Trumpet Narcissus	7/6 per 1000
Glory of Leiden Narcissus	6d. each.
Madam de Graaff	3/6 each.
Sweet Scented Pheasant Eye	
Narcissus	5/6 & 7/6 per 1000.
Mixed Narcissus	5/6 per 1000
Double Daffodils	5/6 & 10/6 per 1000.
Tulips, Mixed (choice)	2/6 per 100.
Single Lent Lilies	3/6 per 1000.
Snowdrops	5/6 & 7/6 per 1000.
Strawberry Plants	1/6 per 100.

SEND FOR LISTS BEFORE
ORDERING ELSEWHERE.

Cross & Son, Wisbech.

CLIBRANS

ORNAMENTAL

TREES & SHRUBS

Prices are for Our Selection Only.

SPECIAL COLLECTIONS of
DECIDUOUS & FLOWERING TREES.

12 Fine distinct kinds	12/-	Larger.
50 Fine Trees, in 25 distinct sorts	40/-	50/-
6 Lovely and distinct Weeping Trees	9/-	15/-
9 Lovely and distinct Weeping Trees	12/6	18/6

SPECIAL COLLECTIONS of
ORNAMENTAL SHRUBS.

6 Pretty and distinct Evergreen Shrubs, in 6 sorts,	4/6, 6/-, 9/- or 12/-
12 Pretty and distinct Evergreen Shrubs, in 12 sorts,	9/-, 12/-, 18/- or 24/-
50 Pretty and distinct Evergreen Shrubs, in 25 sorts,	42/-, 63/-, 84/-, or 100/-
6 Distinct and Lovely Deciduous Flowering Shrubs, in 6 sorts	3/-, 6/-, 9/- or 12/-
12 Distinct and Lovely Deciduous Flowering Shrubs, in 12 sorts	6/-, 9/-, 12/-, 18/- or 24/-
50 Distinct and Lovely Deciduous Flowering Shrubs, in 25 or 50 sorts	21/-, 31/6, 42/- or 63/-
100 Flowering Deciduous Shrubs, in 25 to 50 sorts,	42/-, 63/-, 84/- or 100/-

CLIBRANS
SELECT ROSES.

OUR ROSES, grown in a cool northern climate, invariably give the utmost satisfaction to purchasers. We make Rose-growing a special feature.

Dwarf Hybrid Perpetuals, in choice variety, 6/- to 9/- per doz., 40/- to 65/- per 100. Extra-strong, in pots for forcing, 1/6 to 3/6 each, 15/- to 36/- per doz.

Moss Roses, in lovely variety, 6/- per doz., 45/- per 100.

Teas and Hybrid Teas, in choice and beautiful sorts, 12/- per doz. In pots, 15/- per doz.

Noisettes, in finest variety, 10/- and 12/- per doz.

China Roses, in select sorts, 6/- to 12/- per doz.

Polyantha Roses, 9/- per doz.

China and Bourbon Hybrids, in fine variety, 6/- doz.

Climbing Roses, in fine variety, 9/- to 12/- per doz.

Penzance Briars, a comparatively new, but very beautiful class of Rose, 9/- to 15/- per doz.

Species of Roses.—These have now attained a remarkable popularity, particularly for planting in the Wild Garden. We grow all the most suitable, particulars of which will be found in our Catalogue.

Above prices are for our selection only, and are carriage paid to customers' nearest railway station.

CLIBRANS
SPECIMEN HOLLIES.

WE hold what is, perhaps, the finest stock in the country of specimen Hollies. Perfect in shape, well furnished with foliage, and splendidly rooted.

INSPECTION INVITED.

Ilex Aquifolium.—Grand plants, splendidly furnished, 6ft. to 9ft., 10/6 to 17/6 each. A few extra large specimens, price on application.

Aq. altaculare.—An effective, very hardy smoke-resisting variety, splendid specimens, 6ft. to 7ft. in height, 15/- to 21/- each; 160/- to 240/- per doz.

Aq. argentea elegantissima.—A very ornamental, silvery-leaved variety, grand specimens, 6ft. to 7ft., 15/- to 25/- each.

Aq. Hodginsii.—A grand, vigorous, smoke-resisting variety, perhaps the hardest of all the Hollies, 4ft. to 5ft., 7/6 to 10/6 each; 5ft. to 6ft., at 10/6 and 12/6 each, 120/- and 140/- per doz.; 6ft. to 7ft., 12/6, 21/- each. Larger specimens, 31/6 to 84/- each.

We shall be happy to forward Photographs of Specimen Hollies growing in our Nurseries to intending purchasers. Special Prices for Large Quantities.

Full particulars of the above, and all other varieties of Hardy Trees, Shrubs, and Fruits, are contained in OUR TREE & SHRUB LIST, Gratis & Post Free.

ALTRINCHAM & MANCHESTER



Journal of Horticulture.

THURSDAY, NOVEMBER 12, 1903.

The Effects of the Rain.

It is generally agreed that the memory of 1903 stands a very good chance of living in the history of years as a record breaker. Already the meteorological people have not a reliable record that is not broken, and they are now digging up the dead and gone ashes of the past with the idea of finding something that still remains whole; but it is no good: 1903 has apparently set itself out to be the wettest year in the recollection of history or folk-lore, and considering that November and December have yet got to add their little portions, it is quite likely that the misguided object of the year will be effected.

Under ordinary conditions, the leading daily papers are contented to devote a little share of their space every morning to the meteorological forecast for the next twenty-four hours; but now the weather column is an institution every day, and the rain news seems to attract as much public attention as the fiscal problem.

It is interesting to note also how philosophically the public accepts the perpetual downpour. Back in the summertime, when men had not lost hope for fine weather, there were grumbles at the rain, which dashed the hopes of gardeners, and ruined the "gates" at county cricket matches; but that spirit has quite gone out of us. Rain, rain, rain is accepted as being inevitable, and the optimism of those who take any interest in the weather at all has sunk to the very lowest ebb. To add to the cheerfulness of the outlook, some prying person appears to have discovered spots on the sun, and by some extraordinary means they take this as an indication that we are to have no settled weather for the next few years. Personally, I have no objections to anyone discovering sun-spots who likes to look for them, or even arriving at what conclusions they

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially, to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

like as to what they foretell: but to spring the possibility of having two or three seasons like this on a hopeful community is altogether too bad, and should be at once suppressed.

Taking a serious view of the matter, however, the outlook at present could hardly be more disappointing. Thoughts chase each other back to the disastrous spring, when we hoped that the summer would make up for it; but it did not, and then we hugged ourselves with the thought that we must surely have a fine autumn. October has proved quite otherwise to be the case, and now all hope has gone. What the winter will prove to be seems a matter of indifference, for a spirit of stoicism has come over the community, for which the misfortunes and disappointments of the season are responsible.

First of all, we have had little or no fruit, and though we cannot blame the rain for that, the responsibility rests with another vagary of the weather—spring frosts. Still, if orchards and fruit gardens had returned even a moderate supply of their bounties it would have made up for disappointment in other directions.

Taking the garden as a whole the story of the season appears to be a mixture of good and ill results, and so far as vegetables are concerned, we have ample evidence to show that the kitchen garden suffers much more at the hands of a very dry season than a very wet one. Indeed, with few exceptions, vegetable crops have done well. It is true that in many gardens there is a shortage of root vegetables, such as Carrots and Beetroot, but for some unexplained reason the seeds of these crops failed to germinate, or there would have doubtless been ample growth. The story of Potatoes is not altogether cheerful, on account of the presence of the disease, and those who lifted their crops early have scored a point this year. When disease is prevalent it is considered by some to be the best plan to leave the tubers in the ground as long as possible, as the disease spreads more rapidly after the crop is lifted. If this may be regarded as a rule, then the present season proves the exception, for apart from the fact that the ground has hardly ever been dry enough in October for Potato digging, I am told of many instances where it is hardly worth while going to the trouble of lifting the crop on account of the prevalence of disease. At any rate, I feel relieved that my Potatoes were lifted and stored during the few fine days we had during the latter half of September.

So far as other crops are concerned, we have had an abundance of green Peas and Beans of all kinds, without recourse to the labour of watering and mulching, which adds so much to the labour item in dry seasons. Onions have done well in most gardens, though the rain was doubtless responsible for many glass-raised bulbs running to seed, and after getting over the bad attack of maggot, which checked progress for some time, Celery has grown away rampantly. In all well-arranged gardens there are winter greens enough to stand a siege, though it must be said that the growth is very succulent and the plants would not stand much severe frost. Turnip-growing has been a, b, c this season, simply because we have no opposing force in the shape of "flea," and all through the summer the supply has been unfailing. Some crops have failed us, it is true, as the wet sunless days were disastrous to outdoor Tomatoes, and the cold nights in June checked the progress of Vegetable Marrows. Slugs have been the common bane throughout, and I have never known a season when they have been more troublesome in the kitchen garden. In spite of all things, however, now that we have arrived at a time for general summing up, it may be safely asserted that the vegetable division is the one redeeming feature of a season of disaster.

The story of the flower garden is a mournful one, and I look almost in vain for a gleam of brightness. I have it now, for on a bed in front of me I see tuberous Begonias still gay with bloom. Yes, these plants have saved the situation this year in the bedding department, and have proved beyond doubt their superiority over the older Geranium in a wet season. All the latter plants have made rampant sappy growth, but have produced very little flower, and have been disappointing in consequence, while the weather has been too wet and sunless for subtropical subjects to acquit themselves with any credit. The echo of the rosarian's wail at midsummer, when he looked in vain for blooms for the show, has hardly died away, but the queen of flowers has redeemed her reputation by giving a charming display of autumnal blooms. In fact, these have been

so good and plentiful as to fully merit the idea of the National Rose Society holding an autumn show.

I have reason to complain of annuals, which damped off, ran away to rampant growth, or fell a prey to slugs, but the wet season of 1903 has proved once more the value of herbaceous borders. Most of the inmates of these are never failing, and in rain or shine there is something to look at and something to cut. The cosmopolitan Dahlia has proved that it possesses a secret liking for an abundance of moisture, though late blooms have been scarce for the want of sunshine, and leaf and stem growth on the other hand errs on the side of superabundance. Michaelmas Daisies have been charming, but they would have been better if Old Sol had put in an appearance more frequently; and, at the moment of writing, the outdoor Chrysanthemums are unfurling their flowers in all the front gardens round about. I hope Jack Frost will keep away till the display is over.

Finally, there are stupendous mountains of work looming in front of us, but the daily rain puts the veto on all outdoor operations. Cleaning up is out of the question, and when the autumn digging is to be done, is entirely a matter for speculation. There are alterations to be made, shrubs to be moved, fruit trees to be planted, borders to be renovated, and a score of other operations waiting to be taken in hand; but what can be done when the lower portions of the garden are under water, and the soil elsewhere is a quagmire of mud? No one but a gardening Mark Tapley could be cheerful under existing circumstances, and the aspect at present is quite in keeping with the miseries already suffered in this sodden year.—G. H. H.

Midland Reafforesting Association.

This association has been formed to promote the reafforesting of waste grounds in the Midlands, particularly in the parts of Staffordshire and Worcestershire known as the Black Country. It is the result of a public meeting held in Birmingham on February 12, 1903. The association has to bring home to the public certain facts. These can only be outlined here; they will be fully dealt with in lectures or in future pamphlets: (1) An enormous area lies wholly waste. (2) Pit-tips and spoil banks are ugly, and should be concealed if possible. (3) The greater part of this waste land can be planted with no great trouble, and will readily support trees of appropriate kinds. (4) Plantations so made will be commercially profitable; directly as producing timber, indirectly as increasing the value of building land in their neighbourhood. (5) The presence of trees, besides being pleasant to the eye, and refreshing to tired workers, will improve the general health of the district.

Can 30,000 acres—that is, roughly, a square seven miles each way—be spared for the mere heaping of rubbish? Yet the waste lands of the Black Country amount to far more than this. The association estimates that quite 30,000 acres may ultimately be planted, and that 14,000 acres are ready for immediate development. It has been too often taken for granted that the Black Country is fated to be ever a desert, but forest trees can grow and thrive upon pit waste, upon furnace slag, and even upon the ash of burnt-out shale. Suitability of soil is not, therefore, in question at all, and it can be asserted, without fear of contradiction, that the sole consideration is the state of the atmosphere. Even then it is not a general smokiness that does harm, so much as actual contact with the sulphurous fumes arising from certain quite local industries. But the atmosphere of the Black Country is not so impure as it once was, and it tends to become purer every day.

In certain places trees have been planted and have failed, but careful investigation has generally shown either that kinds unsuited to the soil have been tried, or that, in ignorance of proper methods of forestry, trees too large have been planted. This latter mistake is the commoner of the two, and it cannot be too often repeated, as being sound forestry, though contrary to the rules of good gardening, that the quickest, best, and cheapest way to grow timber for profit is to sow the seed broadcast, the thicker the better, in the spot where the trees are meant to mature, and to leave it to Nature to thin out the weaklings. No manure or imported soil is needed, nor any preparation save a mere forking of the surface. If, however, it is thought necessary to plant instead of sowing, trees of two years or less should be chosen, and the ground must be broken for a spade's depth under each plant.

The Oak and the Conifers are not suited to the district, but, among other kinds, the Poplar, the Willow, the Ash, and the Sycamore may be relied upon to grow freely. Of these the two last have the highest economic value, tons of the wood being

used locally. No considerable return can be expected for at least fifteen years. Business men are accustomed to a quicker turnover, but there are few businesses with a smaller original outlay, or where the returns are obtained with so little trouble. "Be aye sticking in a tree," said Sir Walter Scott's thrifty Laird to his son, "it will be growing when ye're sleeping." The association adopts the same motto in a modernised form:—"Scatter seeds, Nature does the rest."

The membership of the association is 5s., payable to Mr. W. H. Carder, Tividale Road, Tipton, Staffordshire, who is honorary treasurer. The President is Sir Oliver Lodge, Kt., M.A., LL.D., D.Sc., F.R.S. Prof. W. Hillhouse, M.A., is chairman of the council, and the general honorary secretary is Mr. Herbert Stone, Bracebridge Street, Birmingham.

The Liliaceæ.*

(Continued from page 415.)

The gamophyllous flowered, capsular-fruited section contains about twenty-eight genera and 220 species. About one-half of the species belong exclusively to the Cape of Good Hope; one tribe of thirty species to America, and the remainder distributed over the Old World. Very few of them extend beyond the temperate regions. The first tribe is Hemerocallideæ, comprising five genera, characterised by possessing a panicle or racemose inflorescence.

INFLORESCENCE A PANICLE.

Firstly we have Phormium (from Phormos, a basket). This, when grown in large pots, forms a valuable foliage plant, either for conservatory decoration, or for plunging in the flower garden. The flowers are dull red or yellow, and not highly esteemed. The two species are *P. Cookianum* and *P. tenax*. *Cookianum*, especially the variegated form, is the more elegant plant. This species is readily distinguished from *P. tenax* by its dwarf growth, and by its leaves not splitting at their apices. *P. tenax*, the "New Zealand Flax," was first discovered by Sir Joseph Banks in 1770. Describing it, he says it is the chief economic plant found in New Zealand. With its leaves houses are thatched, lines, cordage, and strings manufactured, and from them slender fibres come, which shine like silk, and are as white as snow. These fibres are then woven into the fine clothing. Seeds were received at Kew in 1771, but, failing to germinate, a fresh supply was obtained in 1789, which proved successful.

INFLORESCENCE A CORYMBOSE PANICLE.

The yellow and orange coloured flowers of the Day Lilies—*Hemerocallis*—are familiar objects in our herbaceous borders and shrubberies during summer and autumn. They are of easy culture, flourishing in a deep, rich loam, and are propagated by divisions. Plantations should be renewed periodically, as they soon exhaust the soil. Of the eight species, probably the best are *H. Drumortieri*, which grows to a height of 18in; *H. flava*, which grows to a height of from 2ft to 3ft, both having yellow flowers; *H. fulva*, tawny yellow, is distinguished from *flava* by its more robust habit, colour, and especially by its odourless flowers. The orange coloured *H. aurantica* is an autumn flowerer with more erect leaves.

RACEMOSE.

Blandfordia is the only genus in this section, and must be accorded a place under glass to ensure success in its cultivation. Its species are natives of New South Wales, and, unfortunately, like some other Australian plants, are not easy to cultivate. They are usually described as greenhouse bulbous plants, but in fact they are neither, for during their period of growth they require a higher degree of temperature than that of a greenhouse. The so-called bulb is in reality a fibrous mass. A compost of loam and fibrous peat in equal proportions, with the addition of rough silver sand and charcoal suits them admirably. The best species are *B. flammea*, orange red; *aurca*, yellow; and *Cunninghami*, coppery red. The latter species, which attains a height of 3ft, produces in June twelve to twenty pendulous flowers, and was discovered by Allan Cunningham on the Blue Mountains, N.S.W., growing on a stiff clay. It was first flowered by Messrs. Henderson, Wellington Nurseries, St. John's Wood, in 1868. It is allied to *B. flammea*, from which it differs by its narrower perianth, colour, and broader leaves.

The *Tritomas*, or "Flame Flowers," natives of South Africa and Madagascar, are conspicuous objects during late summer and autumn in beds, mixed borders, or shrubberies, where their orange scarlet racemes are very effective, and form a striking contrast to most plants. Planted in grass, so that they contrast with *Cortaderia*, or *Gynierum*, the Pampas Grass, they give a bold effect. The majority of the species are easily defined by the measurement of their perianth. Thus, in *T. parvifolia* and *T. breviflora* it is from three or four lines long; six to eight in *T. Pumila*, *T. Leichtlini*, and *T. Macowani*; eight to ten in *T. abyssinica* and *T. sarmentosa*; whilst that of *Burchelli*, *Robperi*,

and *aloides* (syn. *Uvaria*) measures from fifteen to eighteen lines. *T. longicollis* is new; *Tucki* is early. In height they vary from 18in, as in *Burchelli*, to 6ft in some forms of *aloides*.

In a dried specimen of *aloides* var. the raceme and scape measured 7ft. This was sent from South Africa by Mr. Cooper in 1862 to the Kew Herbarium. It is from this species that nearly all our handsome garden varieties are derived. *T. Leichtlini* is a handsome form, with a knob-like, vermilion red and yellow raceme, and it was first flowered in 1881. So far as I have observed, this species is distinct from all the others, by reason of its inflorescence being definite, the terminal flowers opening first. It belongs to the section with exserted anthers. Beginning in July with *T. Macowani* and *T. pauciflora*, we have some of the species in flower till November, the latest being *T. corallina* and *T. sarmentosa*. *T. Tysoni* and *Northæ* are distinct, being caulescent, and more resembling a *Yucca*.

The three following species are of more recent introduction, and can scarcely be recommended for cultivation in the open border, being only half hardy. *T. rufa*, a stemless form, from Natal, possessing linear, entire leaves, acutely keeled on the back, 1ft to 1½ft long. The peduncle (stalk) is of the same height, bearing a lax raceme of yellow tinged flowers. *T. Tucki* has densely tufted, serrulated leaves, about 2ft long. The peduncle, with several erecto-patent, rudimentary leaves, supports a dense raceme of deflexed, sulphur yellow flowers, which are tinged with crimson prior to expanding. It blossoms in spring. *T. longicollis* is nearly allied to *T. aloides*, but differs by its dwarfer growth, and firmer, bright green leaves, 2ft to 3ft long. The peduncle is shorter than the leaves, and bears a dense, oblong raceme of bright yellow flowers, tinged with orange.

Funkias are tuberous rooted, and more generally used as foliage than flowering plants. Some of the variegated varieties are useful greenhouse plants, and with perhaps the exception of *F. subcordata*, all the species make good edging plants for mixed beds or borders. The colour of the flowers ranges from white to lilac and pale blue. A succession of flowers can be obtained from May to October by a selection of some of the species and varieties. Thus in May we have *F. ovata*; in June, *F. Sieboldiana Fortunei*; *subcordata* and *lancifolia* from July to October. Of *F. lancifolia* there are five varieties, *F. l. undulata variegata* being the best for pot culture. *F. tardiflora* is the latest to flower.

(To be continued.)

Novelties and Varieties.

The nurseries of Messrs. James Veitch and Sons, Limited, at 544, King's Road, Chelsea, are exceptionally well stocked with plants of rare beauty, and for ourselves we can say that never before have we seen the houses so interesting. The bulk of the flowering plants are cultivated at the new Feltham nursery, so that the Chelsea nursery is practically used for show purposes, and the stock here is all immediately saleable. Any lady or gentleman, or gardener, from the country, with an hour to spare, could not do better than make a visit to the Veitchian houses. Twice a week the vans run from Feltham to Chelsea and back, and a warm shed has been provided in which to house a van-load of tender plants as occasion requires. The vans too can be warmed by radiators in cold weather. We name a few separate subjects as under:—

JASMINUM GRACILLIMUM.—This is a warm house species, having terminal and lateral clusters of delightfully fragrant white flowers. The plant can be grown with a bushy habit, and is one of the finest subjects for the intermediate house that any gardener could select.

THE JAVA RHODODENDRONS.—Go to Chelsea whenever you care to and the hybrid Java-jasminiflorum *Rhododendrons* will be found in flower. For the warm greenhouse they are becoming indispensable, and soon the florist will find them of the greatest assistance in his work of making breast-sprays and button-holes. We would name the following varieties: *President*, a rich red-dish-bronze; *Mrs. Heal*, pure white; *King Edward*, deep yellow, suffused with salmon; *Ne Plus Ultra*, the best crimson of the set; *Primrose* (of that colour); *Jasminum carminata*, carmine; *Amabilis*, bronzy pink, very sweet; *Rose Perfection*, rose-coloured; *Little Beauty*, small clusters of brilliant coral crimson flowers, grand for sprays; and *Latona*, of a pale delicate primrose colour.

WINTER-FLOWERING BEGONIAS.—Practically everybody grows these now, and those who do not are very far behind, but we are sure that few manage them so very successfully as Messrs. Veitch's foremen, Mr. Heal and Mr. Moss, who have them under their charge. The plants are kept stocky and thoroughly clothed with healthy foliage and abundance of flowers. Undoubtedly the brightest of all are *Mrs. Heal* (single) and *Winter Cheer* (double), both of which are scarlet crimson. *Julius*, a double, which we have figured, is a rose-coloured variety, in request by the ladies. *B. Ensign* is another of the best.

* A paper read before the Kew Gardeners' Guild by Donald MacGregor.



Lælio-Cattleya Norma superba.

The parentage of this distinctive and charmingly coloured hybrid are *C. Mossiae* and *Lælia xanthina*. It was shown at the Royal Horticultural Society's meeting on October 13, by Messrs. James Veitch and Sons, Limited, of Chelsea, when an Award of Merit was accorded. The sepals and petals are pale bronzy tea-coloured, very sweet and pretty. The lip is fluted, opening in front, and is delicately coloured light mauve-purple, the throat being yoke-of-yellow hue. Our illustration on the opposite page is from a drawing by Mr. G. Shaylor.

The Week's Cultural Notes.

Growers of Orchids in the metropolitan area and in the vicinity of other large towns will now have to reckon with the fog, the arch enemy of these plants in our dull sunless winters. Complete immunity from fog is a desideratum much sought by all, but surely by none so earnestly as those who have taken the trouble to bring their Orchid safely through the growing season and then wish to enjoy their lovely blossoms. No amount of care can keep it out of the houses, but its ill-effects may be a little lessened by keeping a comparatively dry atmosphere and avoiding over-watering of the compost. Easily said, of course, but when one day is beautifully bright and clear, and we wake up the next morning with the fog around us, not so easily managed.

Yet, when the plants have been gradually prepared for the winter by hardening and ripening, as described in recent notes, there will not be any need of heavy watering at any time, simply because the plants have within themselves the means of sustenance. The hard, sound, and well-developed pseudo-bulb; the healthy, russetty-looking leaf, are they which will stand the winter vicissitudes; but weak and badly-formed ones, on the other hand, need frequent moistening to keep them from shrivelling.

Perhaps in no other genus is this fact more patent than in *Dendrobium*. Consolidation and rest are as necessary with these plants as they are with a vine or fruit tree. Take the beautiful *D. Devonianum* as an instance. The foliage has now all fallen from the long drooping stems, and these will soon be bristling with the swelling nodes that precede the flowers. Ill-developed plants, on the other hand, will have the foliage still struggling on at the top, to be followed—if water is withheld—by the shrivelling and loss of the upper portions of the stem. Keep the sound plants dry, cool and close up to the light now, and a fine free-flowering return will be the result.

D. nobile is rather peculiar in its resting season. Sometimes the stems ripen and flower the ensuing season; at others they remain dormant for a year and flower the next. But in no case should the plant be so severely dried as those of the deciduous section. The Australian set, again, are difficult in this respect. None of them like a long, cold rest, but, on the other hand, they must not be kept moving too freely, for this simply means the loss of flowers in spring. This does, not of course, apply, to the strong-growing *D. speciosum* and its near relation, *D. Hilli*.—H. R. R.

Otto Beyrodt's Collection at Marienfelde, Berlin.

Orchids are cultivated here with the best success. In all, there are about seventy-five thousand to eighty-thousand plants, comprising specially, *Cattleya labiata*, 15,000; *C. Trianae*, 3,000; *C. Mossiae*, *C. Mendeli*, *C. gigas*, *C. Gaskelliana*, each 1,000; *Lælia purpurata*, *anceps*, *autumnalis*, &c.; *Odontoglossum crispum* (15,000 plants); also *Odontoglossum grande*, *citrosum*; *Oncidium Marshallianum*, *O. tigrinum*, *varicosum*, *Rogersi* (3,000 plants); *O. Forbesi* (2,000 plants), *Vanda cærulea* (1,000), *V. Kimballiana*, and *Cypripedium insigne* (4,000); *C. callosum* (2,000), *C. Lavreanceanum* (1,000), and a good stock of the best varieties of various other Orchids.

Big Prices for Orchids.

Growers from all parts of the country attended the sale of Orchids at Harefield Hall by Mr. E. Ashworth, the well-known collector, of Wilmslow. There was some spirited bidding. Nearly 300 lots were disposed of. One plant sold for £200, another for fifty guineas, whilst another rare variety was withdrawn at 500 guineas.

Orchids from the "Harefield Hall" Collection.

From the catalogue of the two days' sale (November 4 and 5) of duplicate Orchids, the property of Elijah Ashworth, Esq., Harefield Hall, Wilmslow, Cheshire, we take the following paragraphs:—

LÆLIO-CATTELEYA DECIA ALBA.

(*C. aurea* x *L. Perrini*). This is a most beautiful albino form, flowered from a batch of intensely coloured varieties with Messrs. J. Veitch and Sons; sepals and petals pure white, lip light rosy-pink veined with pure white lines. F.C.C. R.H.S., Nov., 1897.

CATTELEYA MENDELI BELLA.

A very beautiful variety, sepals and petals blush white; the petals have a pale median line. The upper part of the lip and throat are of a rich golden yellow veined and bordered with paler yellow, while the lower part is of a dark mauve-lilac veined with white. See fig., "Orchid Album," Vol. 5, plate 225. From the "Pickering Lodge" collection.

CATTELEYA WARSCEWICZI VAR. MRS. E. ASHWORTH.

A very beautiful variety. The flowers open white, but in a few days become a lovely blush white veined with white lines; there is a tinge of yellow on the disc of lip and a small lilac mark in front, A.M. R.H.S., July 27, 1897. From Messrs. J. Cowan and Co.

ODONTOGLOSSUM LUTEO-PURPUREUM VAR. ASHWORTHIANUM.

(*Hystrix* form.) A charming variety; flowers across sepals 5in, petals 4½in, sepals reddish chestnut brown with citron-yellow tips and spots at the base; the petals are creamy-yellow and citron at the tips, three large and a few small red brown spots and purple ray at the base, lip large and fringed, primrose yellow in front and red brown in the middle.

LÆLIA FINCKENIANA.

This beautiful *Lælia* is supposed to be a natural hybrid between *L. albida* and a white form of *L. anceps*, and bears a fine raceme of five or six of its lovely flowers. It was imported by Messrs. Cowan and sold to the late Mr. C. W. Fincken, of Barnsley, as a natural hybrid, and was named in honour of him when it flowered. It is one of the most distinct natural hybrids yet introduced; the sepals and petals are of the purest white; lip also white, but has a beautiful crimson purple blotch. Mr. Ashworth holds the entire stock, and the two plants offered are all that he will part with. Described "O. R.," Vol. 2, plate 9, F.C.C. R.H.S., December 14, 1893.

Making a Garden.—II.

(Continued from page 413).

In preparing a plan, always aim at so executing it that a single glance will enable all who know the place to discern what each configuration signifies. For the facilitation of this laudable purpose, coloured inks may be used, and I would certainly advise indelible, which can be procured from Messrs. Winsor and Newton, Rathbone Place, W., in twenty-four different colours, at 6d. and 1s. per bottle. For designating brick and stone work, red will be found appropriate; for trees, shrubs, and grass land, green; and for water, black; or if there is a fondness for colours, blue. If the space between the walls of buildings be shaded, and glass houses left blank, the distinction will be apparent at a glance. The outlines of every part of the plan, whether it be a wall, or the edge of a lake, lawn, or path, should be boldly drawn.

The direction of the swing of every door and gate should be described by a quarter sweep of the compass, shown by dotted lines, and a line running from the pin of the compass to this, perpendicular to the chord of the arc. Let the walls be filled in thickly, the lawns shaded by dotted lines, and woods by short, irregular lines of green, interspersed with black, to give a darker shade. Water may be done in the same way as the lawn, the difference in colour representing the character of each. Timber and ornamental trees may be portrayed by an enlarged and neatly drawn asterisk, and fruit trees by a small and simple drawing of a bush, standard, or pyramid, as the case may be. For wall trees draw a representation of a horizontal or fan-shaped tree projecting from the wall.

Steps may be figured by a series of lines, their number and distance apart corresponding to the number and width of the steps, and the direction of ascent and descent from the main level indicated by an arrow and the word "up" or "down." Hedges may be filled in with a series of dotted lines crossing each other diagonally or perpendicularly. A different way should be found of figuring more or less permanent crops, such as small fruit, Asparagus, Rhubarb, &c. For instance, Strawberries by lines of alternate red and green dots; Raspberries by similarly placed small circles, and so on, there being endless other means of displaying the differences which will readily occur to a thinking mind.

All this will, of course, be tedious, and perhaps monotonous work; but perseverance will enable us to gain in the end, and thus add another bead to the long rosary of proofs which bear out the statement of a Scotch gardener at last August's meeting of the Scottish Horticultural Association in Edinburgh, that "nothing is impossible to the British gardener." Remember the aphorism that "a passionate desire and an unwearied will can perform impossibilities, or what appear to be such to the cold and feeble."

A most useful exercise when the plan is completed is to take a copy of it, which can be very easily done with the aid of tracing and transfer paper, and having drawn the main outlines in faint

lines to mark prominently the location and direction of the water supply and the drains. It may be somewhat difficult to ascertain exactly their whereabouts, but there is usually to be found on every place an old hand who is acquainted with these matters and able to point them out with approximate accuracy, and who is often only too eager to ventilate his knowledge for the edification of his youngers. The direction of the heating apparatus should also be delineated, the employment for the purpose of bold or faint lines representing its subterranean or superterrene portion. In addition to thus enabling us to have in our possession some valuable relics of the place, we shall have gained considerably by the cultivation of a habit of observation, upon which essential attribute depends the success of a gardener.

I have treated at some length of ground plans, but I consider it no less advantageous to take cross sectional plans of the glass structures, showing the relative position of the walks, stagings, hot water pipes, shelves, wires, ventilating gear, &c. Half an inch to the foot is in these cases a useful scale, as it facilitates the drawing, and enables the details to be more clearly and correctly shown.

In the work of measuring we should first line out a level—the path level is usually convenient—and having found this the whole width of the house, the rest is so simple that I need not dwell on it. With the combination of sectional and ground plans we can, by the invocation of a few principles of mensuration, ascertain with an exactitude equivalent to that which the plan bears to the structure the cubical capacity of a house, which is so often required when fumigating; and even by the very act of measuring we necessarily learn by observation many points connected with the construction of a house which would otherwise have escaped our attention.

Returning to the ground plan, when drawn and filled in, the work of casting up the areas commences; and to aid in this I would advise the purchase of a small handbook on mensuration, which may be had for a shilling from Macmillan and Co. It is well-nigh, if not absolutely, impossible to ascertain the exact area of any place having a decidedly irregular boundary; but an approximate figure may be obtained which is sufficiently accurate for all practical purposes. Form within the plan as large a (rectangular) parallelogram, or series of parallelograms, as possible, and find their area by the multiplication of the length by the breadth. Then let the remaining part be divided into squares, oblongs, or triangles, until the whole plan is covered. The area of triangles is found by the multiplication of the base by half the perpendicular height. The area of the whole plan may then be arithmetically added.

Write down neatly in a convenient space the area of the whole plan, the kitchen garden, fruit garden, lawn, lake, &c., also the superficial square feet under glass and under other buildings. Next as to the references. Each separate building and room should be alphabetically marked, and when the entire alphabet has been absorbed in this way, commence it anew with the accompaniment of one of the arabic figures, an index at the bottom indicating the signification of each. Next show the direction of the magnetic needle, and affix a few inches of the scale, with its equivalent, in words beneath. After blacklead marks are rubbed off, and the plan well cleaned, the only thing remaining to be done is to write in clear and bold characters the name of the place, and the name of the artist and the date in smaller but modestly conspicuous hieroglyphics.

Those who take this matter up must expect, as I mentioned at the commencement, to find many circumstantial difficulties which they themselves will best know how to overcome. It may be urged that the head gardener or the squire might object to their taking a plan, but, personally, I think few head gardeners and few gentlemen would be so unreasonable as to deprive a journeyman of such a useful and delightful pastime, provided, of course, he does not make himself obtrusively conspicuous. On the contrary, I think it will be found that the

majority of them will be prepared to assist such praiseworthy efforts on the part of their young men, for it is certain to beget a keen interest in the place, which will, ipso facto, produce a beneficial effect on the daily work.

The young gardener will experience no hindrance in surveying those parts of the garden not overlooked by the hall windows, but those parts falling under these (for him) adverse conditions, he should arrange to do when the family are away, so that his presence in the front may not offend the delicate feeling of the gentry, or lay him open to the charge of possessing an inordinate amount of audacity. In the summer months he can surmount these obstacles by shortening his stay with Morpheus and rising with the sun, thus gaining two or three hours each morning.

Again, his modesty may suggest to him that he is utterly incapable of executing the task, owing to his lack of acquaintance with the sciences of surveying, mensuration, or geometry. Let him not harbour the thought for a moment. Speaking for myself, I had drawn the plan of a garden twelve acres in extent, and with an acre of water on it, before I had seen a book or even read a short essay on land surveying; and it was only when casting up the areas that I speculated in a book on mensuration, although it is indisputable that a slight knowledge of these subjects will greatly simplify the task. I merely mention this personal fact to show that a deep and intricate knowledge is not essential in justifying our making a start, for the work forms a lesson in itself, and our interest once aroused, we will follow up the subject by a happy blending together of theory and practice.

In the act of surveying itself it is a great saving of time and a less strain on our patience to obtain the assistance of a friend, especially when the tape is in use; but this will greatly tax his friendship if he is not interested in the work, and if he is, he will probably expect to share in the honours of success, which it is but natural to suppose the drawer of the plan would prefer to appropriate entirely to himself. So that, all things considered, even though more tedious, it will be in the end more productive of honest pride and unalloyed satisfaction to dispense with any extraneous assistance; and should the drawer be at a loss to know how he is to manipulate his tape, I would suggest that a peg or a brick be used to keep one end in position while he extends it to its length.

The best time for doing all this is undoubtedly during the lighter part of the year, say, from April to October; and although these limits may seem to enclose an all-sufficient space of time, I can assure my readers that if the place they intend to map out be of any large extent, and very irregular, they will find that no time must be lost to complete it within those limits. I have myself been engaged on a plan for seven months, working at it an average of five nights a week, in addition to stopping up often till midnight, rising with the sun, and employing part of the dinner hour; and I wish I could say all my spare time had been so profitably and pleasantly spent.

Young men in lodgings will perhaps be confronted with obstacles which they only can judge whether insuperable; whilst he who enjoys the freedom of a bothy will without doubt be able to prevail on his comrades to allow him sufficient room and licence, and it certainly must be a peculiar bothy where the work could not possibly be done, though I acknowledge

the same cannot by any means be so universally applied to lodgings.

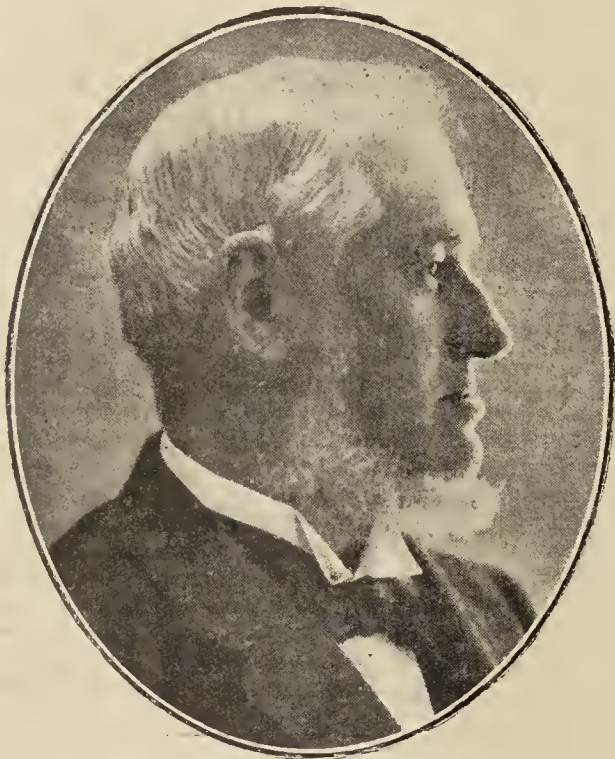
In conclusion, let me strenuously urge all who feel the elements of art within them—and I am led to believe that a love of drawing is an inborn quality in all which needs but developing—to profit by the words I have addressed to them, and prepare for artistic and metrical operations in the spring; and if but one reader can, on reading this essay, say with Milton, "Greatly instructed, I shall hence depart," then shall I have gained some satisfaction in bringing the subject to notice.—WM. ROWLES, Eccles.



Lælio-Cattleya Norma superba.

Retirement of Mr. James McIndoe.

Some weeks ago we announced the retirement of this well-known gardener. This is in consequence of the death of Sir Joseph Pease, Bart., and the sale of Hutton Hall estate. From an interesting biographical notice of Mr. McIndoe, which appeared in a recent issue of "The Gardeners' Chronicle," we take the following:—"As his name shows, he is a native of Scotland, and was born in 1836, his native county being Renfrewshire. His father was a market gardener, and, as a boy, he entered early into what was to be his life's work. His first place on leaving home was in the gardens of Sir John Maxwell of Pollok, the head gardener at that time being a Mr. Campbell. Thence he went to Archerfield, under Mr. Young. These gardens were at that time, and for many years afterwards, when managed by Mr. David



Mr. James McIndoe.

Thompson, considered to be amongst the best in Scotland. The young aspirant to horticultural fame was only about twelve months in his new place before he was made a foreman, being only twenty years of age at the time.

"Later on we find him at Auckland Palace, Durham, as foreman at the age of twenty-one. Thence he went to Bishopthorpe Palace, and Addington Park, Croydon, both in the same position. As will be known to most readers of this journal, these three places were occupied by the then Bishop of Durham, the Archbishop of York, and the Archbishop of Canterbury respectively. In 1863 he was appointed gardener to Coles Child, Esq., Bromley Palace, Kent, which at that time was a place of note in the gardening world, seeing that some hundreds of applicants applied for it when then vacant. A few years afterwards Mr. McIndoe became gardener and farm bailiff to the then Archbishop of York at Bishopthorpe, near York, where he remained till the winter of 1874, when he removed to Hutton. It was here that the chief work of his life was to be done.

"At that time Mr. Joseph Pease was rebuilding the mansion, making new gardens and erecting a splendid lot of new glass houses. The new gardener entered into the spirit of the whole affair with well-directed enthusiasm and, on the whole, very sound judgment. It was quite a treat to meet him at York Gala each year, and hear his vivid but guarded description of the new work done and being done under his management. Very shortly he began bringing object-lessons of his work and care for the judges to look upon and the public to admire. While in no sense wishing to unduly magnify Mr. McIndoe's doing as an exhibitor of fruit, this much may fairly be claimed—that no other gardener has for twenty-five consecutive years, at a first-class show, won so many prizes for fruit as he has done at York. To go further into his record in this respect would be simply to write a catalogue. This much may be added: Mr. McIndoe has often told me that the time he felt most gratified as an exhibitor was in 1897 at Shrewsbury, when he was awarded first prize in the Victoria fruit class for sixty dishes of fruit illustrating the produce of British gardens. Besides the money prize given by the Shrewsbury Committee, the Gold Medal of the Worshipful Company of Fruiterers, London, and two other valuable medals were awarded to this exhibit. As is well known, he was one of the first sixty to whom the Royal Horticultural Society gave the Victoria Medal of Honour later on in the same year. But enough on this head, Mr. McIndoe found time to interest himself in the

social and religious well-being of his neighbours at Hutton. For many years he acted as a churchwarden, and in other ways found an outlet for his judgment and ability. I think that as a body gardeners might fitly do more of this wherever their lot in life is cast.

"Having had the misfortune to lose his wife some three years ago, Mr. McIndoe will make his future home with a married daughter at Dartford, in Kent. He has been appointed to superintend the laying-out and planting a public park for that town. This, with his position as Consulting Horticulturist to the Metropolitan Asylums Board and other opportunities that will occur, will give full scope for his abilities.—Y. G."

Chrysanthemums.

English Novelties in America.

A gardening contemporary in New York ("The Florists' Exchange") described the following varieties in a recent issue, which will give growers here an idea of these varieties' behaviour across the Atlantic:—

MAYNELL is a glorious flower of the largest size, over 8in in diameter, with broad, massive, incurving florets, many over an inch in width; colour, a dark, velvety crimson, with old gold reverse. A most attractive flower, indispensable for exhibition.

MISS MILDRED WARE, a very lovely flower of a unique colour, reminding one of that of Chas. Davis, but with the size and formation of Mme. Carnot. Undoubtedly a grand variety.

F. A. COBBOLD, one of the grandest and easiest growers sent out in years; height, 3ft, with its very large flower set on top of the finest foliage imaginable; colour, bright rosy pink, very distinct, somewhat resembling Mrs. G. Mileham, when well finished.

CHELTONI is the greatest sport we've had in years; never has it been my privilege to see such a beautiful variety. It is the exact counterpart of its parent, Nellie Pockett, with the exception of colour. Usually, sports, more especially from white varieties, are washy and undecided, but in this way we have a most beautiful yellow, quite as deep in colour as Colonel D. Appleton. Those who have not seen Cheltoni can readily imagine a well-grown Nellie Pockett as yellow as Colonel Appleton.

LELIA FILKINS, the brightest of all pinks, much brighter than the best Vivian-Morel; an easy doer; habit of the best, with the flower resembling that of Mme. Carnot in formation.

DONALD McLEOD is a superb variety in every way. An enormous flower carried on stiff, stout stems, retaining its handsome, overlapping foliage to the bench. Colour, bright fiery red, reverse and edge of petals bright gold. Truly a wonderful combination of colour, easily standing out alone in its class.

WILLIAM DUCKHAM undoubtedly will prove the novelty of the season. All who have seen it, without hesitation pronounce it to be the finest introduction in many years. Words can scarcely do it justice. Habit of plant, stem and foliage are all that can be desired. Its massive flowers are carried erect on stiff stems. In colour, it stands alone, being a lovely, warm or glowing satiny pink. Its broad, massive petals, many fully an inch in width, incurving, with the grandest finish possible in a Chrysanthemum. This will undoubtedly be the exhibition and commercial pink when known.

HARRISON DICK, a strong, good grower, with large, handsome, glossy foliage, carried well up under the flower, and retained to the bench. A beautiful combination of bronze and yellow, somewhat on the style of Lord Salisbury, but of a stronger constitution. Flowers fully 9in in diameter.

HENRY BARNES is the darkest of all the crimsons; flowers of full exhibition size, reminding one of George W. Childs, only three times as large and very much more vivid in colour.

BEN WELLS.—In this we have a monster in size, yet a most beautiful, graceful flower, of a soft flesh colour; one of the most vigorous and easy growers.

MATTHEW SMITH, the largest of all Chrysanthemums, the outer petals at this date reach 1ft across; colour is a combination of yellow and bronze.

LORD ALVERSTONE is a very dwarf grower, and undoubtedly the darkest we have; a most fascinating flower. The inner side of petals being so very dark, with the golden reverse showing so conspicuous, make it altogether very attractive.

Described under the head "Early-flowering Varieties," in the same paper, are the seven French varieties, and the following English ones:—

MRS. A. MCKINLEY is a fine, big bloom of buff and reddish gold—a bright colour that lights up beautifully; and we think will prove a taking variety.

ETHEL FITZROY, a grand, glowing flower like an improved Kate Broomhead, very bright in colour, and round and beautiful in form; a stunning sort for cutting October 15.

MISS OLIVE MILLER, a dainty lavender pink, with broad petals arranged in showy form. About the prettiest pink that we have seen at this date (mid-October). Besides the above they have had excellent blooms of CARRIE, Mr. Wells's early yellow, which came into flower by September 15. The colour and form are fine. It is of medium size and a nice grower, but very bright in colour. Where an early red is needed, GOOCHER'S CRIMSON will be valuable; it is free and a nice grower, has a rounded Dahlia-like flower, and would not "burn" if set on fire.

By November 1 LORD HOPETOUN will be fully finished (it is beautiful to-day, October 19, but not ready to cut). It is larger than last year, and, if anything, the colours are more intense—bright scarlet and pure gold.

S. T. WRIGHT is not quite so far along but promises a large size and deeper shades of both gold and yellow.

Trees and Shrubs.

ORNAMENTAL FRUITED KINDS.

The following is from Weathers' "Beautiful Flowering Trees and Shrubs" (Simpkin, London):—Apart from the blossom or foliage, there are many plants that attract more attention during the fruiting stage than at any other period of their cycle of growth. Some kinds are fortunate enough to be considered ornamental in the foliage, flowers, and fruits; some in the flowers and fruit; some in the leaves and fruit; and others in the fruit only. In this paragraph it is unnecessary to refer to either the leaves or the blossoms, as one or the other or both are frequently to be met with. But it may be useful to have a list of the trees and shrubs that are particularly handsome when in fruit, and the following may serve:—

Arbutus Unedo, Aucuba japonica (fœmina), Benthania fragifera, Berberis, Cerasus (Cherry), Clematis, Colutea, Cotoneaster, Crataegus, Daphne Mezereum, Euonymus europæus, Gaultheria, Hippophaë rhamnoides, Hymenanthera crassifolia, Ilex (Holly), Ligustrum vulgare (Privet), Myrtus (Myrtle), Pernettya, Phillyrea, Pyrus, Rosa, Rubus, Sambucus nigra, Skimmia, Symphoricarpos, Vaccinium, Viburnum.

The Scarlet Oak.

This is the season of the year to be looking out for acorns for sowing, to keep up a stock of good kinds. There are a half dozen or more sorts always called for in larger quantities than others. The Scarlet is one of them. Not only does it make a large and handsome tree, but it also has the brightest foliage of all Oaks in autumn, and because of this it is always called for when an Oak of brilliant fall foliage is required. Its common name Scarlet Oak, is well deserved. A singular feature (observes Mr. Meehan, in the "Florists' Exchange") in regard to the colouring of the foliage in autumn, is that it occurs very late in the season. Many other Oaks, and other trees, colour before it, and while the foliage of the Scarlet is still green. In woods this Oak can be told a great distance away by its bright green foliage, so prominent is it among the changing hues of surrounding leaves. Suddenly, and at last, the change comes, and we have the brilliant scarlet. The acorns of the Scarlet Oak have white flesh,—a means of determining the kind when there is doubt.

The Palm House at Kew.

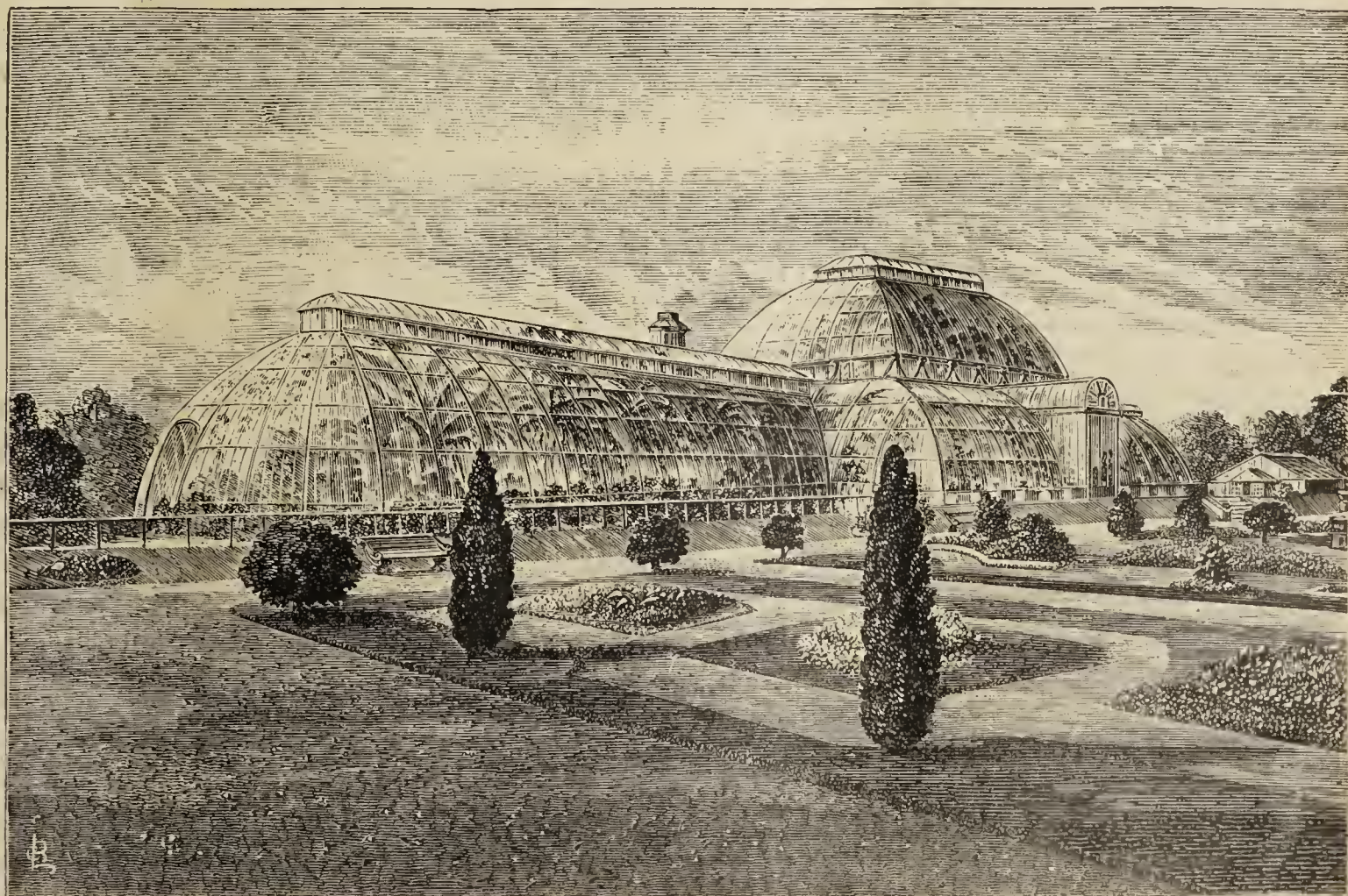
Built in 1848—the year in which "our Journal" was established—this huge tropical stove was the first, we believe, in which iron was employed in such structures. It is 362ft. long, 100ft. wide in the centre, and 66ft. high. The wings are 50ft. wide and 30ft. high. The mileage of hot water pipes we forget. The site had been chosen with a view to giving the best possible effect, and on the sunny south side there is a beautiful geometrical flower garden, a treat to behold in spring, when the bulbous plants present their gorgeous blossoms; and summer does not lessen the variety or the brilliancy of the outlook.

Mr. John C. Willis, in his invaluable book entitled "Flowering Plants and Ferns," supplies the following diagrammatic representation of the different beds in this house, which we think might be given here. The numbers signify the beds, the letters the window benches.

		Door			
	Bench F			Bench B	
		13		5	
Bench G		12		4	Bench C
S. Door	15 14 11			3 6 7 8	N. Door
	Bench H	10		2	Bench D
		9		1	
	Bench E				Bench A
Main Door					

Each bed and stage contains certain genera, as, for instance, Pandanales (the Pandus tribe) in 1, 2, 8; Cycadales (Cycas, Zamia, Dion, &c.) in 12 and 13, and elsewhere; Musas in 11; while in the central beds (we write from memory) are some very fine specimens of the following Palms: Cocos nucifera, the Cocoa-nut Palm, which grows on tropical shores, and always with a bent trunk; Sabal umbraculifera, one of the most useful of Palmæ; the Calamus, or Rattan; Phytelephas macrocarpa, whose seeds yield vegetable ivory, and a visit to No. 2 Museum near the alpine garden will convince one of the commercial importance of this remarkable product. One need not mention others; the list is a very wide one, and possibly only a few are generally known. However, should any distant reader visit London, let us suggest Kew as one of the places for visitation, and he or she may be sure that the numerous features of the Royal Gardens there will afford unbounded delight.

A MONSTER CABBAGE.—A Cabbage grown on Penylan Hill, Cardiff (according to the "Western Mail"), measured 5ft. across before the outer leaves were removed, and weighed 44½lb. The owner has refused 1½d. per lb. for it.



The Palm House, Royal Gardens, Kew.



Notes on Some of the Newer Roses.

(Continued from page 424.)

(The Rose Analysis.)

Continuing with the Hybrid Teas, in the order of merit in Mr. Mawley's list of the newer Roses, after Mildred Grant we come rightly to Bessie Brown, which was sent out before 1900, and is now no doubt pretty well known to all exhibitors; and then to Florence Pemberton, which (as I have before noted) was only sent out this year, and could hardly be rightly voted on by amateurs with much confidence, and next to Alice Lindsell. Of this I can say nothing, as I have only seen one bud, which I have at present in my garden on a "run out" budded stock, which I fear will hardly now come to perfection.

Next comes Duchess of Portland, which gained the Gold Medal for Messrs. Dickson at Birmingham in 1900, having been previously shown at the Crystal Palace. At that time it seemed to me, I confess, to be rather too much like Kaiserin Augusta Victoria in the flower, though distinct in wood and foliage. On further acquaintance I have no doubt it is distinct, that is, an expert would readily distinguish between good strong representative blooms of each variety, and would name them correctly. But when grown weakly, as the flowers would often be in the garden of one who is not an exhibitor, it is certain that such a one would find them so much alike to his eyes that it would not be worth his while to have both varieties. This is not meant to detract from its merits or desirability as an exhibition Rose, nor yet to assert that it is not as good or better than the other, but merely that the ordinary gardener who wants especially distinctness in colour would hardly find it worth his while to have both.

The descriptions of the colours of Duchess of Portland and Kaiserin Augusta Victoria are so worded as to imply that the former has more of yellow in it than the latter. I have lately had the opportunity of comparing them both with a new Rose not mentioned in the list, Perle von Godesberg (Schneider or Lambert (?), 1902), which is spoken of as a golden yellow sport from Kaiserin A. Victoria. I had a good bloom of it a short time ago from a strong "run out" shoot, and comparing it with two ordinary autumnal flowers of the other two varieties, it seemed to me that Duchess of Portland was a little (but only a very little) more yellow than Kaiserin Augusta, but rather larger and a little different in shape, and that Perle von Godesberg was a trifle the yellowest of three, but identical with Kaiserin in every other respect; and that, to the ordinary cultivator, if not grown strongly all three varieties would be practically white. I gather, however, from Paul and Son's new catalogue that Perle von Godesberg is "variable in colour, sometimes almost orange, sometimes almost creamy white." As to Duchess of Portland, it is well worth growing by an exhibitor, but I should not give it nearly so high a place; I would put certainly Lady Moyra Beaclerc, and I think also Mamie, above it; in fact, these two would come here in my list of H.T.'s.

Papa Lambert comes next in Mr. Mawley's list (which of course I ought not to call his list, as it is the result of an election), and a splendid Rose it is, as I have seen it in nurserymen's stands, but not in my own garden, either as cut-back or maiden; and this is well confirmed by the election, as it obtained 123 points from nurserymen and only 88 from amateurs. It is of fine robust growth, and I can quite believe it was merely bad fortune that I did not get a single good bloom of it from six or eight standard plants, maiden and cut-back; perhaps it is better as a dwarf.

Of Gladys Harkness, the next on the list, I have one bloom very nearly out, but I can say nothing of it at present except that it certainly is not white, and that is something to say of a H.T. nowadays. Lady Moyra Beaclerc, the next on the list, is a very fine Rose indeed, in my estimation. I won the Silver Medal as best H.P. or H.T. with it at Norwich this year, and exhibited it with success at almost every show. It is very fine indeed in shape, large, and of beautiful colour, which is brightest in the half-developed blooms. I am surprised it did not gain the Gold Medal, which has been given, at times, to far inferior Roses. I have only grown it at present as a standard, and expect that as a dwarf the shoots require to be staked, for though the growth is not weak it is rather slender and the blooms pendulous. It is a Rose which exhibitors cannot afford to be without. Edith D'Ombra, the next on the list, has not yet bloomed with me, so I cannot speak of it.

It is worthy of notice how prepotent (as breeders would say) is the strain of Baroness Rothschild (to which both Mabel Morrison and Merveille de Lyon belong): both Her Majesty and Robert Scott, especially the latter, show it plainly. The latter would have been very much improved if it had gained only a little more of the very pointed shape of its parent, Mrs. W. J. Grant; it is of better form than Merveille de Lyon, but much wanting in the elegance of form which is the charm of most of the new H.T.'s. Nevertheless, it is

often good, requiring hot weather and impatient of rain, but very free-flowering and a good autumnal.

Liberty (A. Dickson & Sons, 1900) is another new H.T. which is not unfrequently shown by nurserymen, though amateurs will seldom get it large enough for that purpose. It has also with me not proved a very good grower; otherwise it would have been a splendid Show Rose indeed—magnificent in form, a good laster, and of that splendid bright crimson colour, which is just what we are wanting in H.T.'s. A larger and strong-growing Liberty, if you please, Messrs. Dickson.—W. R. RAILLEM.

(To be continued.)

Peculiar Plant Names.

Other than the name known to the botanist, a plant or flower bears many a common name, quite sufficient for the ordinary individual. It is, no doubt, better to be able to correctly name a plant, but as so many have such long and unpronounceable designations, it is little wonder the common ones are oftener used, even in the best nurseries and gentlemen's gardens, these being more easily committed to memory.

There are many familiar plants bearing a number of names with which the reader may be unacquainted, because in many instances the names are local. Some of these names are most curious, sufficiently so to make one wonder how they were originated, as there is not always anything in the growth or appearance of the plant or flower to suggest a cause for so naming it. For example, in the Bone-flower, "Apes-on-Horseback," how many would recognise the common double Daisy—*Bellis perennis*? Then the pretty and easily grown *Saxifraga sarmentosa*, so useful for a hanging basket, is known also as Creeping Sailor, Kenilworth Ivy, Mother-o'-Thousands, and the Wandering Jew.

In *Linaria vulgaris* some will recognise the Toadflax, Eggs-and-Bacon, and Buttered Haycocks. Another well-known plant having a number of curious names is *Phalaris arundinacea variegata*. It is to be found in almost every garden; in fact, one can hardly pass a cottage in the country without finding a border of this pretty Grass in front, it grows so profusely. It will force easily, and will be found most useful for cutting when other foliage is scarce. Almost everyone will recognise it under one of the following names, viz.: Ribbon Grass, Sword Grass, Bride's Laces, French Grass, Painted Grass, Lady's Laces, Lady's Garters, Silver Grass, Lady Grass, or Gardener's Garters.

Love-in-a-Mist, Lady-in-the-Bower, Love-in-a-Puzzle, or Devil-in-a-Bush are no doubt suggested by the form of the flower of *Nigella damascena*. One would think His Satanic Majesty had quite a large acquaintance with our garden subjects; judging by the number of plants coupled with his name, the most prominent among them being the Devil's Apple, or Mandrake, a poisonous hardy perennial herb, rarely grown, and having curiously shaped roots. The Devil's Candlestick, or Catmint (*Nepeta Glechoma*) is a hardy herbaceous trailing perennial, suitable for borders, edgings, rockeries, or baskets. Devil's Fig (*Argemone mexicana*), known also as the Mexican Poppy, Thistle Oil Plant, Infernal Fig, Yellow Thistle, and Prickly Poppy, is a very pretty hardy annual bearing large pale yellow flowers, somewhat like Poppies, as some of its names imply. The Devil's Garter (*Convolvulus sepium*) is the common garden Bindweed. It is sometimes recommended for quickly covering trellises, old tree stumps, &c., but for myself I prefer to do without it rather than run the risk of this weed getting out of bounds. Among other names we have Devil Wood, *Osmanthus americanus*; Devil's Bean, *Capparis cynophallophora*; Devil's Bit, *Scabiosa succisa*; Devil's Herb, *Plumbago scandens*; Devil's Milk, *Euphorbia helioscopia*; and Devil's Trumpet, *Datura Stramonium*.

Countryman's Treacle sounds peculiar, a name given to *Ruta graveolens*, the common Rue, used for medicinal purposes. *Viola tricolor*, Heartsease, or Pansy is also named Three-faces-under-a-hood, Kiss Me, Kiss-me-at-the-garden-gate, Kiss-me-ere-I-rise, and Jump-up-and-kiss-me. How a dwarf growing plant like the Pansy came by the latter name is a puzzle.

Lady's Fingers and Foxgloves everyone is acquainted with, but I fail to see what there is in *Digitalis purpurea* to suggest Dead Men's Bells. *Jatropha gossypifolia*, a stove flowering plant, has the suggestive name of Belly-ache Bush, and is also called the Physic Nut. *Pulmonaria officinalis*, a useful little rockery plant having prettily marbled foliage, has a number of peculiar names, of which perhaps the Beggar's Basket is the most curious. Other names for it are the Sea Bugloss, Jerusalem Cowslip, Bedlam Cowslip, and the Virgin Mary's Honeysuckle. *Colchicum autumnale*, or Autumn Crocus, Fog Crocus, Michaelmas Crocus, and Meadow Saffron is also called Naked Ladies, no doubt from the flowers appearing without any foliage.

There are many other quaint and curious names I could mention, but the foregoing should be sufficient, for the present at any rate, to show that a lot of interesting and amusing information concerning the beauties of nature in our gardens may be derived from a study of plants and their various names.—J. W. J., Oswestry.

NOTES & NOTICES

Dartmouth Show.

The show was held on Wednesday, November 4. A spirit of competition ruled the neighbourhood. The Mayoress opened the show in the presence of a large number of people.

The American Parks.

Our contemporary, "American Gardening," which we announced as having changed hands at Mr. Withers' death, is now devoting some pages weekly to news of the American parks and parkmen. This department is being edited by G. A. Parker, of Hartford, Connecticut. He has the knowledge of parks of the country which had come to him by being (for three years) chairman of the Park Census Committee, the advantage of a collection of park reports (over 1,600), and his correspondence with park people (now numbering over 4,400 letters), which fits him for the work. A weekly circular letter is sent round to the leading parks, in order to obtain information.

Horticulture and Home Industry.

The Horticultural and Home Industrial Society in connection with Messrs. J. S. Fry and Sons, Limited, Bristol, has held its first annual meeting and distribution. Mr. A. M. Fry, president of the society, occupied the chair, and in his opening address said he hoped the annual meeting was the forerunner of many more to be held in connection with the society. The event of the evening having arrived, the distribution of prizes won at the last flower show was made by the president and Mr. C. B. Fry, after which a vote of thanks to the president, vice-presidents, and patrons for their hearty support during the past year was carried with acclamation.

Cardiff Botanical Garden.

Mr. W. W. Pettigrew, the able parks superintendent of Cardiff, gave an extremely interesting account to the Cardiff Naturalists' Society on the botanical garden in Roath Park. The Naturalists' Society, so far back as 1888, displayed practical interest in the subject of botany, and by their directions the late Mr. A. Pettigrew catalogued and labelled all the trees in the Sophia Gardens. That enterprise, however, proved a failure, because there was not adequate supervision, and Mr. Pettigrew's labours were nullified by mischievous boys, who tore away the labels. When the Roath Park was presented to the town by the late Lord Bute, the Cardiff naturalists again took up the matter, and a deputation waited upon the Cardiff Corporation. Prominent among that deputation was the late Mr. Sonley Johnstone, who in the columns of the "South Wales Echo" had directed attention to Cardiff's need in the matter of facilities for the study of botany. The Naturalists' Society asked the Corporation to set aside a portion of the park as a botanical garden, and the Council, with characteristic readiness, at once granted their petition. Acting upon the advice of the borough engineer, they allocated that portion of the park lying between the Taff Vale Railway and the lake embankment, measuring in all fifteen acres. Under Mr. W. W. Pettigrew's supervision the botanical garden has from unpretentious beginnings grown into probably the finest in Wales. In the first year Mr. Pettigrew managed a collection of some 300 herbaceous plants, and about forty or fifty different species of trees and shrubs. To-day there are between 1,200 and 1,300 different herbaceous plants in the borders, and between 350 and 400 different species of trees and shrubs. The usefulness of the garden has been demonstrated again and again. It supplies the University College with a great amount of their material for the botany class, also the Technical schools and the Board schools, who are now taking up Nature study. Mr. Pettigrew informed his audience that there was plenty of room yet for improvement, and instanced the need of glass structures in which to grow the purely tropical plants and also some of the Alpine orders. The lecture, which was closely followed by the audience, was illustrated by a series of splendid pictures of the plants in the Roath Park botanical garden.

Chudleigh Show.

Mr. Abraham, Lord Clifford's gardener at Chudleigh, at Chudleigh Chrysanthemum Show last week, won for the third year Mr. St. Maur's eup for the best collection of Japanese cut blooms. Mr. Abraham also won the committee's special prize for the best bloom in the show. A new Violet, "Lady Clifford," was shown by Mr. Abraham.

United Horticultural Benefit and Provident Society.

The monthly committee meeting of this society was held at the Caledonian Hotel, Adelphi Terrace, Strand, on Monday evening last, Mr. C. H. Curtis in the chair. Three new members were elected, making a total of eighty this year to date. Seven members were reported on the sick fund. The amount of sick pay for the month was £21 12s.

Royal Meteorological Society.

The next ordinary meeting of the society will be held at the Institution of Civil Engineers, Great George Street, Westminster, S.W., on Wednesday, the 18th inst. at 7.30 p.m. when papers will be read on the following subject:—"The Great Dust-fall of February 21 and 22, 1903, and its Origin." 1. By Hugh Robert Mill, D.Sc., LL.D. 2. By R. G. K. Lempfert, M.A.

The Ether Treatment.

In order to obtain flowers out of their natural season, it is possible to retard their growth at an early stage by placing the plants in cold, dry houses, and then to force them later under the influence of heat and moisture, or it is possible to stimulate the young buds into premature development by subjecting them to the effects of ether. M. A. Maumené, a strong advocate of the etherisation system, discusses its scientific and practical aspects in the "Revue Scientifique." He maintains that not only do plants develop more quickly after being etherised, but that development is more regular and complete.

Honour to Mr. Matthew Todd, Edinburgh.

We learn with much pleasure that the members assembled at the meeting of the Scottish Horticultural Association on November 3, on the motion of Mr. A. Mackenzie, Warriston, unanimously elected Mr. M. Todd an honorary life member of the Association for the long and varied services he has rendered to the Association, more especially as having contributed for many years many valuable and artistic exhibits. Mr. Todd occasionally contributes to the *Journal of Horticulture*. He is one of the best known florists in Scotland, and takes a keen interest in all that pertains to the welfare of horticulture in the northern kingdom.

Suggested Amalgamation of East Kent Gardeners' Societies.

The idea emanating from the Canterbury Gardeners' Society with respect to the amalgamation of the East Kent Gardeners' Societies appears to be receiving attention on all hands, says the "Folkestone Express." Mr. Woodcock, of the Canterbury society, at a meeting gave an able and concise explanation of the amalgamation scheme. He observed that nearly every village had a society, and it was wished to amalgamate all these in East Kent for mutual encouragement and assistance. The first show should be held in Canterbury, and after that the place of the exhibition would be decided by ballot, each society eventually having the show in its own village.

Scottish Horticultural Association.

Exhibits at the latest meeting were numerous and interesting. Mr. Webster, Gordon Castle, exhibited a nice collection of Apples, Pears, and Plums; a special cultural certificate was awarded. Mr. Waldie, Lamont, showed a vase of very handsome Chrysanthemums. Mr. Fraser, gardener, Kilravock, sent two handsome plants of Soleil d'Octobre Chrysanthemum. Mr. Chapman, St. Leonards, sent small plants of Turnford Hall Begonia, and a sport from it. Mr. Todd, Shandwick Place, Edinburgh, exhibited a beautifully arranged basket of choice Roses from the open grounds of his gardens at Musselburgh; also a beautiful plant of the handsome Cape Gooseberry, Physalis Franchetti, and a splendid vase of cut decorative Chrysanthemums. *Callicarpa purpurea*, from Mr. Johnstone, Hay Lodge, was very interesting. Votes of thanks were awarded to the exhibitors.



Science at Wisley.

The chairman of the Scientific Committee of the Royal Horticultural Society invited suggestions as to what scientific investigations might be undertaken in the new garden at Wisley. Might I suggest the subject of the colouring of Apples, a discussion on which is appearing in the *Journal of Horticulture*? Anyone intent upon absolute daylight on the question of colouring, might proceed in the next dry season to gently and repeatedly spray Apples about August without wetting the ground materially, so as to cool it, while other trees of like varieties might have a good drenching off and on, besides syringing. If a difference becomes apparent in the colouring, the result might be conclusive as to first cause. That the effect of copious artificial waterings in dry seasons acts similarly to rain seems meanwhile a better means for drawing the right inference than any other suggestion as to the causes of colouring in Apples.—H. H. R.

Grapes at the Chiswick Show.

I think it can scarcely be said that the famous exhibition of fruit at Chiswick made any very great impression on the minds of visitors so far as pertains to the varied Grape classes. Whether the absence of the anticipated standard was due to the dignified environment—the famous vinery—or the unsuitable staging space, remains unsaid. Certainly the narrow side stages were far from being unsuitable to display high-class Grapes at their best, and there were many comments on the generally low standard of quality compared with what has been associated with the R.H.S. and the Crystal Palace shows of the past. The greatest disappointment naturally centred itself in the collections of eighteen bunches and twelve bunches respectively. In the first named, only one competitor came forward, and those who remember so clearly the triumphs of the Elvaston fruits this year, naturally expected great things in reserve. It is, however, only just to say that the merits of individual exhibits are only fairly gauged by competition. “Walk over” exhibits are never interesting to anyone, not even to the “winner,” and it cannot be accounted less than melancholy that so poor an exhibition should await inspection by the patrons of the Society. Only one reason can be assigned to account for it, and that is the money value of the prizes offered. At many provincial exhibitions better prizes are given for smaller exhibits. Such prizes allow of no margin when out-of-pocket expenses are paid.

Then, again, three bunches are too many to expect; two bunches in six varieties would be ample, and would make an exhibition far superior in all-round merit. It could be distinctly seen in the separate classes that the third bunch often fell below the standard of the other two, and this is an experience familiar to every exhibitor. The class provided for twelve bunches, in four varieties, found no entry at all. When one reflects on the fine shows of Grapes seen at the Crystal Palace in past years a feeling of disappointment is inseparable; because what was possible then is, or ought to be, just as much so now.

Grapes that gave evidence of the finest finish from an exhibition point of view were Mrs. Pince, Madresfield Court, and Muscat of Alexandria. The first named were staged in beautiful condition, as also were Madresfield by one or two growers. Muscats were the more numerous, and as varied in their development of colour. The third prize exhibit had the deepest coloured fruit we remember to have seen this year, and hanging on the Vine with the accompanying shade of the leaves it must have appeared intense. The light afforded by the Great Vinery was not an ideal one to present the colours of any Grapes at their best, but it did not hinder the contrast of the golden tints of the many bunches on view. The exhibit under notice would undoubtedly have found more favour from the judges were not the berries on the upper portion of the bunches shrivelled, through exposure to sun. The Muscat class was the strongest contested one in the show, and brought together some exceptionally fine fruit. Alicantes were less meritorious in bunch, and certainly deficient in colour, compared with some former exhibitions we have seen. That some excellent Grapes were brought together in the class need no emphasis; but the Alicante is a Grape familiarised by massive, jet-black bunches, so that one is excused in the expectancy to find them in their better form at so convenient a season and at so dignified a show. One exhibit did present the characteristic jet-

black berry and the dense bloom of Alicante, but many more were deficient in both.

Of Black Hamburgs, some were good, others very commonplace; indeed, critical onlookers whispered loudly that some of the Grapes would scarcely do credit to a local village show. Neither Mrs. Pearson nor Golden Queen make attractive exhibition Grapes, the colour being dull and the berries undersized. Still they possess a quality superior to some other Grapes of more showy character, and are useful in winter.

In the smaller Muscat vinery, the Grapes comprising a portion of the collections of mixed fruit (nine dishes and six dishes) were seen to much better advantage, and from each of the three exhibitors—Messrs. Goodacre, Lock, and Mitchell—came excellent, if not the best, Grapes in the show, of both black and white varieties.—R. A. W.

Apple, Annie Elizabeth.

Recently you published a letter describing the good fruiting and selling qualities of this variety. Can any of your readers explain why so handsome, solid, and useful an Apple is not included in the generally accepted “best fifteen”? I should be obliged to correspondents for information.—E. D.

Millipedes and Centipedes.

The little leaflet on the above insects, reproduced in last week's *Journal*, cannot be expected to give more than brief details, but I must remark that some of the centipedes are not deserving of the good character given to the family. It is true, as the structure of the jaws shows, they are not herbivorous, and, above ground or below, employ themselves in hunting other insects; still, fruit has its attractions for them. The chief sinner is *Geophilus longicornus*. This sinuous species takes or makes an opening in a Plum or Apricot, winding its way into the stone, round which it coils itself. Hence it happens that the eater of stone fruit frequently bites a centipede in two; perhaps swallows part unawares. Again, it is very observable that several species are luminous, mostly during spring or autumn. This is particularly the case with *G. subterraneus*, which, on account of the fact, has also received the name of the Electric centipede. Its light, however, does not seem to be electrical, but rather of the nature of phosphorescence. It is observable along the joints of the body, and it is, unlike the glowworm in this respect, that the light is deposited along its path as it crawls, and may be seen two or three feet from the insect, though it soon fades. No doubt it answers some purpose.—ENTOMOLOGIST.

The Colouring of Apples.

The somewhat diffuse length of the contributions to your columns on this subject, do not appear to traverse my more concise, and yet broader, hypothesis on page 380. The former do not advance beyond the analytical point of view, while I reach the bedrock itself by the synthetical process. The first cause of the cooling of summer conditions is usually rain. The soil is cooled, and nitrification (and with it expansion of fruit) is retarded. We all know of the exuberant growth of tropical vegetation, which is, of course, the consequence of the higher state of nitrification of the soil from the sun's greater intensity. The reverse action follows from the cooling of the ground in our own land. The incidence of cooling of the air, and rough winds springing up, are phenomena that accompany the advent of rainy weather. Nitrification is therefore probably the most essential one in the problem of fruit colouring. It may be tacitly admitted that the chemical process set up by the sun's heat acting directly on the fruit, independently of heat developing in the soil, is probably the element which induces colouring (of course, on the sunny side of the fruit), and takes place when fruit expansion is retarded by cooler conditions, and energy is liberated to another purpose. Mr. Willis's citation on page 417 of foreign authorities may cover the ground fairly well by their reference to the beautiful carmine-red in the upper cells, the element which ensures colouring. The process referred to by me, “the fall of temperature,” is here also emphasised. Frosty conditions, of course, usually only follow fruit gathering in these parts. In relation to the experiments also referred to by Mr. Willis, whether various manures affect the colouring, undertaken by Mr. Hall, the range of such experiments, locally practised, would have only limited application. The mineral substances in the soil would have more effect on colouring than mere fertilisers. The very various characters present in fruit from different localities is probably chiefly to be accounted for by minerals of various kinds in the soil.

Apples from warmer climes than ours, referred to by “Provincial,” their relatively high colouring is, of course, a response

to the yet fuller action of our great orb on the surface of the fruit itself in those regions; the expression of the action and conversion into yet richer tints than with us being its equivalent, when in due time rain follows. The "cold snap," of course, affects the soil that is in a high state of nitrification, but it usually comes about by rainy weather setting in, in the first instance. It is not "in spite of the rain," as "Sunny South" opines, that fruits colour, but from its cooling influence.—H. H. RASCHEN, Sidcup.

Large Potatoes.

Having seen a few different accounts of large Potatoes, I have been led to pen these few remarks of my experience with the Potato Up-to-Date. This season I planted a few tubers which have yielded the heaviest Potatoes I have ever seen. I lifted one tuber making the remarkable weight of 2lbs 15½ozs, and a very good shaped tuber it was. I also lifted one root with six fine, even tubers, fit for any exhibition table, the six weighing 7lbs. There were also three smaller tubers on the same root, making the total weight of 7lbs 10½ozs. There were a good many of the tubers weighing 1½lbs, and not one diseased tuber in the whole crop. Is there any record of a heavier Potato than the above?—W. B., Kent.

Scottish Horticultural Association.

(Queen Alexandra Chrysanthemum Prize, 1903.)

With your kind permission, I would like to say that the "Queen Alexandra Prize" is not out of place. Does our friend, "Interested" (page 401), think that the gardeners in a town can compete against gardeners from the country? I say no! the town gardener never has a look in. I am sure that it was a great credit to the Council of the Scottish Horticultural Association to think of giving the gardeners in Edinburgh and Leith a class to themselves. I can inform "Interested" that there are as good growers of Chrysanthemums in Edinburgh and Leith, at the present time, as in any part of the United Kingdom, and I can assure our friend "Interested" that there will be a big competition for the "Queen Alexandra Prize." Following up the remark made by another friend, "Anglo-Scot," page 416, I would say that if a vote was taken at the Scottish Horticultural Association's meeting in Edinburgh, I am sure there would be a great majority vote in favour of the "Queen Alexandra Prize." It is, I may say, the Edinburgh and Leith gardeners that are the mainspring of the Association. They are nearly all town gardeners that attend the meetings of the Association; and I think that they (the town gardeners) deserve a class to themselves for their trouble. If our friends ("Interested" and "Anglo-Scot") have the opportunity of visiting the Chrysanthemum Show in Edinburgh, they will see the Edinburgh and Leith gardeners are second to none.—W. W. S.

[We have no wish to take sides in this controversy, but we would observe that if the Edinburgh and Leith growers are "second to none," why is there any need to shut off cultivators from the other parts of Scotland or England? To win in open competition would surely be the greater honour.—Ed.]

Farmyard Manure.

(Continued from p. 423.)

Treatment of Dung in the Homestead.

Attention should be given to the prevention of the escape of liquids, for these hold the larger and much more valuable part of the plant food. These may drain into the ground if the floor of the yard or dung-heap be porous, therefore the surface on which the mass rests must be water-tight. More frequently, perhaps, they are allowed to run away in a surface stream, and unless this can be led on to a meadow or other field, the loss may be very serious. The floor of the dungsteads should not only be impervious to the passage of liquids, but it should have a distinct slope backwards, so that the front is 2ft or 3ft higher than the back. No doubt concrete is the most satisfactory form of floor, but no great waste, if any, will take place through a foot of well-beaten clay overlaid by rubble.

Over-heating is productive of loss in various directions. The heat that is always more or less associated with a mass of dung shows that actual burning is going on, and, in the process, nitrogen escapes into the air. The weight of organic matter is also reduced, and as part of the value of farmyard manure is due to its being a bulky organic substance, it is undesirable to have this substance largely consumed in the dung-heap. During a winter's storage the loss of weight will usually be

about 20 to 30 per cent., but it may be double this, and when the loss is excessive the capacity of the mass to suck up and retain liquids is correspondingly reduced. Moderate decomposition cannot be avoided, and is not to be regretted, for if no loss has occurred by drainage, and but little by the air, the smaller mass will contain practically all the original plant food, and this, too, in a more portable and convenient form. If, for instance, 5 tons have shrunk to 4 tons, the value of the latter quantity should be as great as the former, so that if 5 tons of fresh dung are worth 15s.—i.e. 3s. per ton—4 tons of matured dung will still be worth 15s.—i.e., 3s. 9d. per ton.

Over-heating is avoided by keeping the mass well compressed; and this is secured by the treading of animals—as in yards, courts, or boxes—or by wheeling each barrow-load or cart-load over what was there before, or, by loading on soil or rotten turf. The mass should also be kept saturated with moisture, and this is best secured by preventing the escape of liquids. With dung of a very dry character (horse manure), especially in a covered dungstead, it may be desirable to add water, but only if there is no chance of superfluous moisture escaping by drainage.

If manure is stored in a compact, deep dungstead, with a properly constructed floor, and if care be taken to prevent its getting more water than falls directly on it in the form of rain or snow, there is no need to cover it in. Loss by excessive washing can be better prevented by other means than by erecting a roof over the mass. It is obvious that the advantages of a covered dung-heap will be greatest in a district of heavy rainfall, but in any case it is doubtful if it will pay to provide a roof for the dungstead unless it can be also used as a cattle-shed.

Many farmers prevent loss due to escaping liquids by leading these directly on to the land, or by conducting them to a tank which is periodically emptied into a liquid manure cart and distributed over the land. If the character and lie of the fields suit such methods of treatment, they are in every way commendable, but local circumstances often make it difficult or impossible to carry them out.

Over-heating and excessive loss of weight are obviated by compression and saturation, simply because the dung-heap under these conditions contains comparatively little air, and air is a necessity of fermentation and decomposition.

To bring raw manure into a rotten condition, farmers often turn it over once or twice, the result of which is that air permeates the whole mass, and great heat is developed, with corresponding loss of weight. No doubt there are circumstances where such treatment is expedient; but, considering the cost of labour and the loss of organic matter, and, to some extent, of nitrogen, it is probable that the process is often performed when it would be better avoided. The familiar example of the slow combustion of a "backed" or "banked" fire of coals is strictly comparable with what takes place in a well-packed mass of dung, while in both cases rapid combustion, with concurrent disappearance of solid material, will follow vigorous stirring.

Equality of composition throughout the whole mass should be secured as far as possible, or otherwise the best results both in the heap and on the crop will not be secured. The dung from the stable, cow byre, feeding byre, store byre, and piggeries has, in each case, its own characteristics, and the mingling of all will produce, on the whole, better material than having the horse dung in one part, the cattle dung in another, and the pig dung in a third. The wet, inert, cold character of byre dung will add moisture to the stable dung and prevent its being over-heated ("fire-fanged" it is sometimes called), while the rich manure from the feeding boxes will improve the quality of the dung of the store cattle.

Conservation Agents.

From time to time attention has been directed to the prevention of loss in manure heaps through adding gypsum, super-phosphate of lime, kainit, or sulphuric acid. On the whole, it cannot be said that any of these has much effect. The admixture of soil with dung, however, is always to be recommended, provided such material can be obtained at little expense for labour. To give the best results, the soil so employed must be of a loamy character, and, if possible, rich in organic matter. Its effects are to fix ammonia, to encourage the formation of nitrates, to assist in consolidating the mass, and to suck up and retain liquids. Needless to say, soil so employed must not contain the seeds of troublesome weeds or the germs of plant diseases, such as finger-and-toe. Moss litter or peat is also an excellent fixer of ammonia and absorbent of liquids, and, if for nothing else than to improve the manure heap, it is a good plan to have a little in use for some of the live stock. Such peaty manure, unless it is being used in a yard, should daily be spread in the dungstead, and the quality of the resulting mass will be thereby appreciably improved.

(To be concluded.)

Crotons show highest colour when pot-bound, and exposure to the cool nights of October will accentuate it and make them all right for Christmas trade. As a rule anything that checks growth heightens colour.



Apple Gascoigne's Scarlet Seedling.

This is one of the handsomest of dessert Apples, the fruits from pot trees assuming, under favourable culture, the richest crimson colour. Messrs. Bunyard and Co., Limited, staged exceedingly fine pot-grown trees of the variety at Chiswick this year, and the colour was quite extraordinary. We figure four fruits (reduced) on the opposite page, from a photograph by Mr. Tyler, of Halstead, Essex. The fruits are large, and possess an agreeable flavour. It is advised to prune the tree lightly. Its cropping qualities are well known, the tree being a healthy grower, especially on the Paradise stock. It is both used for dessert and for cooking (mostly for cooking), and is fit from October till January. Though best known by the name we here use, it is occasionally referred to as Glory of England.

Newer Varieties of Fruit in Banffshire.

The monthly meeting of the Scottish Horticultural Association was held in Dowell's Rooms on Tuesday, November 3. A very large number of members were present. A dozen new life members and about fifty new ordinary members were elected. A paper was read by the secretary entitled "Notes on Newer Varieties of Fruits." The paper was a very interesting and instructive one, and passed in rapid review the more recently introduced fruits. Though in a far northern climate, proximity to the sea and shelter from winds render Gordon Castle a fairly favourable place for outdoor fruits. Amongst Apples Mr. Webster (the essayist) specially mentioned as worthy of note Newton Wonder, Bailie Nelson, Early Victoria, Rivers' Early Codlin, Foster's Seedling (an improvement on Cellini), Allington Pippin (extra choice), Christmas Pearmain, Wealthy (not quite a success in Scotland), and James Grieve (a great acquisition). Pears and Plums were also passed in review. Of Pears not many of recent introduction succeeded better with him than old standard sorts. Of Plums he specially mentioned Burbeck, Golden Transparent, Monarch, Grand Duke, and Archduke. Among Cherries, St. Margaret's was mentioned as a very first-rate recent introduction. Among Gooseberries Langley Beauty and Langley Gage were specially praised. A most interesting discussion followed the reading of the paper, and much interesting information was elicited from, amongst others, Mr. Whyttock (Dalkeith Park), Mr. D. W. Thomson, Mr. A. Mackenzie, Mr. Comfort, and the chairman, Mr. McHattie. A very hearty vote of thanks was awarded to Mr. Webster.

The 1903 Vintage.

On the Continent, as in England, every extreme of weather has been experienced this season. Not only the exceptionally late frost (that of April 18 was alone estimated to have reduced the value of the possible Grape crop in France by something like twenty millions sterling), but hailstorms, excessive rains, and the resultant mildew have played havoc with the Vines in almost every district. Added to this, spasmodic heats during the early summer—notably in Italy—have made up a sum of misfortunes which it is confidently asserted will, in the wine-production of the four great Vine-growing countries of Europe—France, Spain, Portugal, and Italy—result in a deficit of no less than forty million hectolitres, or say 880 million gallons, as compared with the yield of an average year. As regards quality, it is true that some twenty days of sunshine, coming at a time when the Grapes in ordinary years would have been in the fermenting vats, have wrought wonders in the vineyards, so that wine-growers have had the satisfaction of seeing a flood of continuous October sunshine, increasing the degree of saccharine in the fruit day by day, and, where the Grapes have escaped any damage from the excessive moisture of the previous months, there is still a prospect of the wines being of good merchantable, if not commanding, quality. In the matter of quantity, this year's vintage must be a great disappointment, with scarcely an exception, in every country of Europe, while, as regards quality, except in the most favoured localities, no very great hopes can be entertained of a production of wines of the highest class.—W. AND A. GILBEY.

A PROFITABLE APPLE TREE.—Mr. Blow, of Little Hale, near Sleaford, Lincolnshire, has an Apple tree that produced him this season twenty stones of Apples, which he sold at 4s. per stone—£4 in all.

Societies.

National Chrysanthemum, Crystal Palace, November 10, 11 & 12.

SUMMARY.—The first day (Tuesday) was delightful, and there was a good attendance. The exhibition was smaller than usual, and the flowers generally were less meritorious. At the same time it was a very interesting show. Mr. N. Davis won in Class 1; Messrs. C. Beckett and R. Kenyon stood thus in the great vase class; Mr. Hunt alone showed in Class 3; Mr. Higgs led for the thirty-six incurveds; and Mr. Mease was again foremost for the forty-eight Japs. The leading prizewinners in Division I. were the above and Messrs. Jefferies and Bastin. Mr. Vallis was absent this year.

After twenty-six years at the Royal Aquarium, Westminster, the N.C.S. exhibitions have had to be moved elsewhere. The only fitting place was the Crystal Palace, which unfortunately is not central, and at this season of the year is not so comfortable to visit as the Aquarium was. The light and the space for staging is very much better, however; and there were some nursery firms who refused to bring plants within the Aquarium who are represented at the C. P. on this occasion. The arrangements with the Crystal Palace Company are for the present year only.

We desire to mention the good services of Mr. Geo. Caselton, of the C. P. gardens, and his staff in assisting Mr. R. Dean in making the arrangements at this show. The judges were:—For plants and groups, Mr. J. F. McLeod and Mr. A. Turner; cut blooms, Mr. J. Fulford, Mr. C. Orchard, Mr. G. Inglefield, and Mr. W. Robinson; decorations, Mr. E. Hill and Mr. T. Challis; fruit and vegetables, Mr. W. Allen and Mr. G. Woodward. The following acted as stewards: Messrs. J. McKercher, D. Ingamells, J. T. Windy, A. J. Foster, and E. F. Hawes.

Donors of special prizes were as follows: Messrs. G. H. Richards (XL All specialities); Mackenzie and Moncur, Limited, W. J. Godfrey, H. J. Jones, Charles E. Shea, Percy Waterer, and Webb and Sons.

Except for one or two classes, the first thirty were open to all, trade included. The total number of classes in the schedule was seventy-seven, divided thus: For cut blooms (in the three divisions), forty-three; for plants, including a group, five; for decorations, nine; for fruit, six; for vegetables, fourteen.

At the shows of the society this year new regulations have come into force, entailing entrance fees, these in a number of cases being as much as 10s. per class.

CLASS I.—FLORAL DISPLAY OF CHRYSANTHEMUMS.

Plants, cut blooms, and cut foliage were here desired, and the space allotted to each competitor was 300 superficial feet. £10 10s. was the first prize, and 10s. entry fee was necessary. To ensure the collections being judged in harmony with general recognised principles, a maximum of fifteen points is set as a standard, and are allotted as follows:—

	Points
A. For quality of Chrysanthemum blooms, whatever may be the type employed	6
B. For quality of the foliage plants, as shown by their elegance, colour and adaptability	3
C. For attractive arrangement	6

The schedule had the following note:—"It is particularly desired that exhibitors shall break away as far as possible from the ordinary formal arrangement of groups of Chrysanthemums for exhibition purposes."

Mr. Norman Davis, Framfield, Sussex, was an easy first, the groups did not need a second glance; and Messrs. J. Peed and Son, Roupell Park Nurseries, West Norwood, S.E., came second. The latter set up a conical, even mass, and certainly had made no attempt to comply with the schedule Note which we print above. Mr. Davis's group was a model of excellence. Round the base were purple Mahonia, and throughout the group were standard Crotons, and tall vases filled with his Mrs. Mease and Madame Carnot Chrysanthemums amongst others. In the body of the group (it was mostly below the eye) were masses of blossoms, with Kentias, Eulalia, Ferns, and Asparagus.

GREAT VASE CLASS.

Class 2, for twelve vases of Japanese blooms, distinct, five blooms of each, for the first prize of ten guineas and Sir E. Saunders' Memorial gold medal, brought out a couple of excellent displays. Mr. C. Beckett, gardener to Sir W. G. Pearee, Bart., Chilton Lodge, Hungerford, led off with large but not very refined flowers. Reading from left to right they were: Gen. Hutton, Mrs. J. Bryant, Mrs. W. Mease, Mrs. F. W. Vallis, F. S. Vallis, Mrs. Barkley, Mrs. A. R. Knight, W. R. Church (good), Madame C. Naglemakers, J. R. Upton, Geo. Penford, and Madame Paolo Radaelli. The latter two were good. Mr. R. Kenyon, gardener to J. R. Twentymen, Esq., Monkham, Woodford Green, was a fair second, his best being Bessie Godfrey, F. S. Vallis, Mr. T. Carrington, and W. R. Church. Only two competed.

NATIONAL COMPETITION OF CHRYSANTHEMUM AND HORTICULTURAL SOCIETIES.

Class 3, for forty-eight blooms, 24 each of incurveds and Japs, the entry to be made in the name of a society, brought only one display, and this came from that champion grower, Mr. G. Hunt, of Ashted Park, Epsom. He staged for the Epsom and District. All the flowers came from this one cultivator, and they were remarkably fine. They deserve a fuller notice than we have space to give, but the newer and best were: Florence Penford, one of the most beautiful and distinct Japs of recent years; it is a J.-i., reddish-bronze on the inner surface and rosy-tea on the reverse. Godfrey's King was good; also F. S. Vallis, Madame Paolo Radaelli, Madame Herrewége, and Bessie Godfrey. The incurveds were clean and large, though not so even as we have seen in other years. The finest were C. H. Curtis, Mrs. F. Judson, Mrs. C. Crooks, Duchess of Fife, Hanwell Glory, Ada Owen, and Dome d'Or.

HOLMES' MEMORIAL CHALLENGE CUP.

Two Cups are offered by means of private subscriptions, one for thirty-six incurveds and the other for forty-eight Japs. Mr.

Pride, rose-crimson, bronze reverse, rather flat, and rough at the base; F. S. Vallis, a model bloom, smooth, large, rounded, very clear yellow. Other good flowers were Madame P. Radaelli, large, and good in all respects; Mrs. E. Thirkell, small, but of good colour; Mme. Carnot; Capt. Percy Scott, moderate size, flattish surface, fair depth, very rich bright yellow; Countess of Arran, a passable flower, but the colour here was a washy mauve-purple; Mr. T. Carrington, Lord Ludlow, and E. Molyneux. The second award was captured by Mr. R. Kenyon, with bright blooms, but the general quality was decidedly lower than that in Mr. Mease's set. His best were Godfrey's King, Matthew Smith, General Hutton, Mrs. A. McKinley (just certificated by the American N.C.S.), a firm built, bronzy-yellow flower; Chas. Longley, rich purple amaranth, a beautiful and telling flower; Donald McLeod, a sweet rich yellow with purplish streaked tips; Bessie Godfrey, Godfrey's Pride, E. Molyneux, and Nellie Pockett. Mr. Jefferies, Moor Hall, Harlow, Essex, staged as his best the following: Mrs. E. Hummell (well thought of in U.S.A.); Bessie Godfrey, Sensation, Mrs. Mease, Mrs. F. W. Vallis, Mons. Chenon de Léché, Elsie Fulton, Maynell, Mme. Von André, Ethel Fitzroy, and C. Longley. The crop of the last year's



Apple, Gascoigne's Scarlet Seedling.

Higgs, gardener to J. B. Hankey, Esq., Fetcham Park, was leader in the class for incurveds, with a well-dressed, highly creditable collection. The blooms were shown all even and pure in colour. The more select were C. Blick, large, but good shape, and beautifully tinted; Miss A. Dighton, a very sweet yellow—a gem; Mme. Lucie Faure, milk white, good; Mrs. F. Judson, large, pure white; C. H. Curtis, intense yellow, high centre; and Robt. Petfield, a lilac-purple of round form. Mr. W. Mease, gardener to A. Tate, Esq., Downside, Leatherhead, was a decidedly inferior second; Mr. G. Hunt came third; and Mr. W. L. Bastin, gardener to Sir A. Henderson, Bart., M.P., Buscot Park, Faringdon, was fourth.

Mr. Mease led for the four dozen Japs (c. 5), with heavy, richly coloured blooms. The stand included Miss Mildred Ware, good colour; Nellie Pockett, immense size and perfect form, colour milky white, with polished surface—a fine flower altogether; Phyllis, bad form, but fine golden colour; Alfriston, a rich crimson (Is it an improved Molyneux?); Bessie Godfrey, good form; Sir H. Kitchener, moderate size, good form; Guy Hamilton, a very large and graceful bloom; Henry Stowe, firm, round, incurving; Duchess of Sutherland, rich colour, but loose; Matthew Smith, a fair flower; Mr. F. W. Vallis, rich crimson and old gold, high centre, a distinct and interesting flower; Godfrey's

novelties was great, and the flowers we name were good, though moderate in size. There were but three entries, each excellent for the season.

SIX VASES INCURVED BLOOMS were asked for in class 6. The lead was with Mr. W. Higgs, who staged large flowers of even form and good finish. The first was a novelty, Mrs. Barnard Hankey (Wells), a large, rounded deep flower, purplish crimson on surface, and bronzy, purple-shaded on the reverse. He had also Nellie Southam, C. H. Curtis, Duchess of Fife, Hanwell Glory, and Lady Isobel (immense deep blooms). This was really a splendid exhibit, and one to be proud of. Mr. G. Hunt, of Epsom, was second; and Mr. W. L. Bastin, third.

GODFREY'S INTRODUCTIONS.—In class 7, for thirty blooms of ten varieties, shown in vases, three blooms each, not necessarily the same sorts, all to be Exmouth introductions since 1900, there were two entries. Mr. R. Kenyon was first, and Mr. A. Jefferies second. It only required a glance to see how rich the colours of these Exmouth introductions are, golds and crimsons run all through. The following were the finest blooms in the first set: H. E. Hayman, Bessie Godfrey, Godfrey's King (small, but rich), Exmouth Rival (smooth broad petals, deep glowing crimson), and Queen Alexandra. In Mr. Jefferies set were Mrs. John Balfour,

rose-lilac and white; Queen Alexandra (very good, in colour), Bessie Godfrey (perfect), and Exmouth Crimson.

ENGLISH-RAISED SEEDLINGS NOT YET IN COMMERCE.—For Mr. H. J. Jones' prizes (six varieties, three blooms of each, on boards, in class 8), Mr. H. Perkins, gardener to the Rt. Hon. W. F. D. Smith, M.P., Greenlands, Henley-on-Thames, was the only entrant with the following: Mrs. J. Wheeler Bennett, a beautiful rich yellow of round form and moderate size, not by any means stiff. Mrs. Winfield, somewhat of the Matthew Smith type, flattish at first, opening to a rounded dome, with soft canary yellow colour; the base florets are purplish. Winifred Countess of Arran, a massive blue purple flower; the Hon. Mrs. Seymour, a deep rounded flower, rich bronzy-yellow with reddish shading, somewhat of the Lord Ludlow type; Herbert Winfield, small, with drooping broad bronzy-crimson florets; and lastly, the Hon. Mrs. Codrington, a sulphury yellow, lax and round. None of them are "extra special."

Division II.

PLANTS.

CLASS 9.—There has been a considerable falling-off in this division during recent years, and as the Society now only offers four classes for plants, it is evident this section is still waning. There was only one entry for six bush plants, the prize going to Mr. H. Smith, gardener to Colonel Bowles, M.P., Forty Hill, Enfield, who had beautiful specimens of John Shrimpton, Phœbus, and Nellie Pockett. The single specimen came from the same exhibitor with a nice plant of Amy Ensoll. (No further exhibits.)

CUT BLOOMS.

CLASS 13.—The President's Prize was offered in a popular class, that for 24 Japs, a class in which the President, in his exhibiting days, was most successful. On this occasion there were six contestants in the field, Mr. A. Jefferies winning the coveted award. His varieties were Mdme. Carnot, Mrs. Barkley, J. R. Upton, Mdme. Herewege, Countess of Arran, Lord Ludlow, Mdme. P. Radaelli, Bessie Godfrey, W. R. Church, Mrs. J. J. Thorneycroft, Marquise V. Venosta, E. Molyneux (good), Miss Elsie Fulton, Godfrey's Pride, General Hutton, Mrs. J. Bryant, Ethel Fitzroy, Miss Alice Byron (fine), Mons. Chenon de Léché, Nellie Pockett, Sensation, Mrs. E. Hummell, Ben Wells, and Calvat's Sun. Mr. James Preece, gardener to Miss Willmott, Warley Place, Brentwood, was a good second, having Henry Perkins, Lady M. Conyers, Bessie Godfrey, W. Duckham, W. R. Church, and W. H. Whitehouse for his best. Mr. J. Lock, gardener to the Hon. Justice Swinfen-Eady, Weybridge, was a good third.

CLASS 14.—The competition for twelve Japs is always most keenly contested, and here there were nine competitors. Mr. G. Hewitt, gardener to C. E. Green, Esq., Theydon Grove, Epping, was an easy first, his blooms being Rev. W. Wilks, of grand colour; Matthew Smith, Mrs. G. Mileham, Kimberley, Florence Molyneux, Marquise V. Venosta, Lord Ludlow, Mrs. J. Bryant, Sensation, Bessie Godfrey, Mrs. H. Weeks, and Mary Inglis. Mr. George Halsey followed with a good level board, his best varieties being Mrs. G. Mileham, W. R. Church, Mrs. Mease, G. J. Warren, Australie, and Le Grand Dragon; while Mr. H. Smith came out a good third.

CLASS 15 was for a vase of white Japs, six blooms in one variety. There were three entries, and Mr. W. G. Prudden-Clark, York Road, Hitchin, was placed first with a fine exhibit of The Princess. Mr. G. A. King, gardener to K. Jones, Esq., Knightons, East Finchley, was second with a fair exhibit of Nellie Pockett; while Mr. George Wilson, gardener to E. T. Powell, Esq., Brondesbury Park, brought up the rear with Guy Hamilton.

CLASS 16.—A similar class was provided for yellow flowers, and there were five entries. Mr. A. Jefferies, gardener to J. Balfour, Esq., Moor Hall, Harlow, was placed first with a glorious vase of J. R. Upton; Mr. W. Mease followed with F. S. Vallis in grand form; the third prize going to Mr. G. Halsey, gardener to J. Lyon, Esq., Riddings Court, Caterham Valley, with Mrs. Mease. Mr. G. A. King was fourth with Le Grand Dragon.

CLASS 17.—The vase of six, of any colour except white or yellow, brought out a satisfactory entry of eight. Mr. W. G. Prudden-Clark was placed first with Mrs. G. Mileham, Mr. G. Halsey following with the same variety; and Mr. A. Jefferies was third with E. Molyneux (of grand colour). Mr. W. Barrell, gardener to Mrs. R. Thornton, The Hoo, Sydenham Hill, fourth, with Miss Mildred Ware.

CLASS 18.—The class for twelve distinct incurveds was supported by five exhibitors. The first prize was awarded to Mr. W. L. Bastin, who staged Mrs. H. J. Jones, Hanwell Glory, J. Lyne, Duchess of Fife, Chas. H. Curtis, J. Agate, Ialene, Countess of Warwick, Edith Hughes, Lady Isobel, W. Neville, and Nellie Southam. Mr. C. Lane was second, and Mr. R. J. Jolliffe third.

CLASS 19.—For six incurveds, one variety only, there were

five entries, the first prize being well won by Mr. C. Lane, gardener to E. H. Coles, Esq., Burntwood, Caterham, who staged Chas. H. Curtis in good form. The second prize had neither name nor exhibitor; and the third prize fell to Mr. R. J. Jolliffe, Bonchurch, who staged Lady Isobel. [Our representative was unable to discover the location of the six market varieties asked in class 20; probably there was no entry.—Ed.]

Large-flowered reflexed, class 21. How sadly have the reflexed varieties fallen in the hands of the N.C.S.!! Only one class was provided for the section for twelve blooms, not less than nine varieties. This was represented by two exhibitors. Mr. Chas. Brown, gardener to R. Henty, Esq., Langley House, Abbots Langley, was first, his best blooms being Cullingfordi, White Christine, and Dr. Sharpe. Mr. J. Barrance, gardener to G. W. Taylor, Esq., Hadley Bourne, Barnet, came second, with smaller though beautifully fresh flowers. Class 22 was not seen. Class 23 was for twelve large-flowered Anemone blooms, Japanese excluded. Mr. J. Barrance was awarded first prize, and Mr. Chas. Brown came second. Neither exhibit was worthy of a prize at a National Society's Show.

Large-flowered Japanese Anemones; class 24. A class was provided for these, though, sad to relate, there were only three entries. Mr. A. C. Horton, gardener to H. H. Platten, Esq., Harwood Hall, Upminster, was placed first with a fair display—and a bad method of naming the flowers! Mr. C. Brown following with smaller blooms, while Mr. J. Barrance was third.

Pompons, class 25. The class for nine bunches of pompons, six blooms each, in vases, was an innovation, and justified the alteration from the orthodox board. There were but three entries, Mr. Chas. Brown being a good first. His varieties were Wm. Westlake, Prince of Orange, Pygmalion, Black Douglas, Mdle. Elise Dordan, Osiris, Harry Hicks, Comte de Morny, Madame Marthe, Rubra Perfecta, and Madame Marthe. Mr. T. Caryer, gardener to A. G. Meissner, Esq., Weybridge, staged well; while Mr. G. A. King brought up the rear. Class 26 for Anemone-pompons was not found.

The single varieties (class 27) were shown in only one class, and although only three competitors faced the judges, they worthily upheld this section. The premier award fell to Mr. A. Dear, gardener to W. Jordan, Esq., Palmers Green, who staged Admiral Sir T. Symonds, Elsie Neville, Annie Farrant, Edith, Earlswood Beauty and Crown Jewel in grand style; Mr. H. Redden, gardener to G. W. Bird, Esq., West Wickham, came second with good bunches of Mrs. Forbes, Frank Redden, and Crown Jewel; while Mr. W. C. Pagram was third.

FLORAL DECORATIONS.

These were of rather ordinary quality, and not numerous. In class 28, for three epergnes, the three competitors showed well. Miss Cole, Feltham, was first with a very elegant light arrangement of yellow and bronze, with Ampelopsis and Croton foliage and Asparagus trails; second, Mr. D. B. Crane, with a nice arrangement of yellow. In class 57, for two hand bouquets of Chrysanthemums, there were also three competitors; whose productions were not specially effective. Mrs. Brewster, Canterbury, was awarded first prize, Mr. Olliver second, and Mrs. Taylor, East Finchley, third. In class 59, for a basket of foliage and berries, there were only two competitors. Mrs. Taylor, East Finchley, was first with a very attractive exhibit; Mrs. Brewster, second. Miss Cole exhibited a very graceful basket of foliage not for competition. In the class for a basket of Chrysanthemums, Miss Anty, West Norwood, was first, with a very handsome arrangement; second, Miss Cole; and third, Mrs. Crosby Smith, Loughborough Road. These were also very attractive. For one vase of Japanese blooms (c. 30), with any foliage, Mr. Barrell, gardener to Mrs. Thornton, The Hoo, was first with very handsome blooms of Mrs. Barkley, with Nephrolepis foliage. Mr. A. King, Knightons, East Finchley, second, with Le Grand Dragon. In class 58, for one vase of six Japs, with any foliage, Mr. Prestell, of Elston, was first, with very beautiful blooms of F. S. Vallis, decorated with Croton leaves, grasses, and Asparagus. Mr. A. Robertson was second with Mrs. Barkley. Ten vases pompon Chrysanthemums (c. 29), Mr. Robertson, gardener to J. F. Yarrow, Esq., St. John's Wood, was first with a very commendable exhibit; Mr. Pagram, Weybridge, second.

CLASS 55.—Mr. D. B. Crane, of Highgate, here led against four, winning the silver challenge cup outright, for the display of cut decorative Chrysanthemums. Mr. P. L. Johnson, Bishop's Stortford, second; and Mr. C. F. Court, Plaistow, third.

CLASS 56.—Miss Mary H. J. Antey, West Norwood, won the silver challenge cup given by Mr. Waterer for a decorated table, using orange-coloured flowers. Mr. D. B. Crane used yellow, white, and pink to more effect, yet came second. We sincerely sympathise with Mr. Crane for the number of times he is placed second, when his taste and skill, in our opinion, place him an easy first. We also hear what the visitors say. Mr. Taylor third.

AMATEURS' CLASSES—Section A.

There were but two competitors in the class for eighteen Japanese blooms, distinct, the first prize being awarded to Mr. C. Bellis, gardener to Mrs. G. M. Faulkner, Forest Hill, whose best blooms were F. S. Vallis, Mrs. Barkley, Madame Waldeck

Rousseau, Miss A. Byron, and Chas. Longley. Mr. A. W. Seabrook, gardener to W. Willes, Esq., Ellerslie, Buckhurst Hill, Essex, was a good, even second.

The class for twelve Japs was well contested, there being five exhibitors. Mr. A. Osmond, gardener to A. Kempt, Esq., South Norwood, won the first prize with nice flowers of W. R. Church, Matthew Smith, Mrs. Barkley, and Nellie Pockett. Mr. L. Gooch, gardener to T. W. Jones, Esq., South Norwood, was second. Class 34 was for twelve distinct incurved varieties. This was well won by Mr. A. W. Seabrook, who had good flowers of Duchess of Fife, Countess of Warwick, C. H. Curtis, and J. Lyne. Mr. H. W. Culham, gardener to D. Birt, Esq., Blackheath, followed next.

Section B.—For eighteen varieties there were but two competitors, the first prize falling to Mr. A. R. Knight, Ashford, who staged a bright set. His best blooms were Godfrey's Pride, The Princess, Lady Beaumont, Mrs. G. Mileham, W. R. Church, and Sensation. Mr. F. Wells, 181, Albert Road, South Norwood, was second, and had a good lot too.

For twelve Japs (class 36) there were six entries. Mr. A. F. Hill proved the victor with a stand that would have done credit in the open classes. The best blooms were F. S. Vallis, Mrs. E. Thirkell, Madame P. Radaelli, C. J. Salter, and Duchess of Sutherland. Mr. E. Ogden, High Street, March, was second; and Mr. H. E. Hawkins, Blackheath, third.

FLORAL COMMITTEE.—NOVELTIES.

The exhibits on this occasion were very numerous, especially in Japs and singles. The committee, however, place such a high standard of merit on the flowers that few obtained awards. Many of those passed will perhaps be seen to advantage in future exhibitions.

Mrs. Barnard Hankey (W. Higgs).—A very large incurved variety, very like Lord Wolseley in colour, and more glorified in form. (See also report of class 6.) F.C.C.

J. H. Silsbury (Mr. Silsbury, Shanklin, I.W.).—A beautiful Japanese variety with long petals, terra-cotta colour with a gold reverse, the tips of the petals curling gracefully. F.C.C.

W. Pascoe (T. Bullimore).—A good incurved pink, with true shell-like petals, a trifle rough as exhibited, large, and may be better staged. F.C.C.

Mrs. J. Dunn (H. J. Jones).—A fine variety, white, with creamy centre, good deep flowers, drooping petals. F.C.C.

Pink Beauty (Mr. H. Redden).—A nice single pink, described by the name. Commended.

Miss Alice Dighton (W. Higgs).—A good incurved form, straw yellow, of good size and nice petal; an acquisition. F.C.C.

Miss Jessie Dean (H. J. Jones).—A good single pink with a white centre, staged in sprays. F.C.C.

FRUIT CLASSES.

Six classes were allotted to the fruit division, the first being for three bunches of white Grapes, where three exhibits were staged. Mr. W. Taylor, gardener to C. Bayer, Esq., Tewkesbury Lodge, Forest Hill, won handsomely with well coloured Muscat of Alexandria. Mr. W. Lintott, gardener to W. Greenwell, Esq., Marden Park, was second; and Mr. Jas. Bruce a poor third. The black Grapes class, from which Gros Colman was barred, brought three entries. Mr. W. Lintott won with Black Alicante; Mr. W. Taylor followed with better colour, but smaller bunches; while Mr. J. Preece was third, with very large bunches lacking in colour. The three bunches of Gros Colman only induced one competitor, Mr. Taylor, who had heavy bunches.

The six dishes of dessert Apples had three entries. First fell to Mr. W. Stowers, gardener to G. H. Dean, Esq., Whitehall, Sittingbourne, with Blenheim Orange, Cox's Orange, Allington, Ribston, Gascoigne's and King Pippin. Mr. Chas. Crane, Maidstone, second; and Mr. W. Lintott third. Six dishes of culinary Apples brought out only two entries, Mr. W. Stowers leading with Bramley's, Peasgood's, Lane's, Mère de Ménéage, Bismarck, and Gascoigne's. Mr. Chas. Crane was second.

VEGETABLES—CLASSES 64 TO 77.

For a collection of nine kinds, Mr. A. Basil, Woburn Park, Weybridge, won Messrs. Webb's first prize; and Mr. W. L. Bastin was second. The Carrots (New Prizewinner), Beet (Volunteer), Autumn Queen Cauliflower, and Onions were good in Mr. Bastin's set. For a collection of eight kinds (class 77) Mr. R. Mairs, Shobrooke Park, Crediton, Devon, was leader; Mr. C. Brown, Langley House, Abbot's Langley, second; Mr. H. Folkes, Gaddesden Place, Hemel Hempstead, third; and Mr. A. Basil fourth.

For three Cauliflowers Mr. H. Folkes led with Veitch's Autumn Giant out of five. Three Savoy Cabbages: R. Nairns, out of six entries. Three Red Cabbages: R. A. Horspool, Ruabon, out of five entries. Plate of Brussels Sprouts: A. Basile with The Wroxton, out of six. Six Carrots: A. Basile, with new Scarlet Intermediate St. Valery, six competing. Six sticks of Celery: H. Folkes, with Bibby's Defiance (a good white), five entering. Sir Parsnips: A. Basile, with Hollow Crown, out of five. Six Beets: A. Basile, with Pragnell's Exhibition, six entering. Six Leeks: R. Mairs, with The Lyon, very thick, and about 12in blanched, five staging. Eight Onions: R. Mairs, with

good Ailsa Craig, out of five. Nine White Turnips: H. Folkes, with Model White Stone (real beauties), there being six displays. Two varieties of Potatoes, eight of each: R. A. Horspool (unnamed); there were six entries.

NON-COMPETITIVE EXHIBITS.

Mr. H. J. Jones, Ryecroft Nursery, Lewisham, made one of these displays for which he is so justly famous. The whole group was bold and effective. Huge vases were filled with Japanese varieties, such as Mrs. J. Dunn, a grand white; Miss Olive Miller, Hon. Mrs. Ackland, F. S. Vallis, Nellie Bean, Duchess of Sutherland, and Edith A. Fuller. These were all arranged with Bracken and other autumnal foliage. The specimen blooms included good examples of Mrs. J. C. Neville, F. S. Vallis, E. H. Parker, Maud du Cros, W. Duckham, Major Powell Cotton, Chas. Hobbs, and Colonel Garratt. A good collection of singles and decorative varieties were also on view. Needless to say, the exhibit was most artistically arranged. (Large Gold Medal.)

Messrs. Cannell and Sons, from Swanley, set up their brilliant Geranium flowers in bunches, and the top of the table was crowned with Lorraine Begonias. We note the names of some of the Geraniums in our Highgate report. They also contributed a conical, rounded group of Cannas, a table of exhibition Chrysanthemum blooms, and a splendid exhibit of highly coloured, unblemished Apples. They had dishes of St. Joseph Strawberry, and trusses of Raspberry Surprise d'Automne (yellow). Lastly we would name their immense exhibition Onions, but with them there were others for everyday use. (Large Gold Medal.)

Mr. W. J. Godfrey had a large display of cut Chrysanthemum blooms, but the travelling and the draughtiness of the Palace had not improved them. We noted F. S. Vallis, Exmouth Rival, Britannia, Godfrey's Masterpiece, Mafeking Hero, Kimberley, Loveliness, Miss Elsie Fulton, Bessie Godfrey, and Glory of Devon, each in fine form. (Gold Medal.)

Hobbies, Limited (Mr. J. Green), Dereham, Norfolk, had a really remarkable collection of cut Roses, wonderfully bright and pure. They had also an enormous display of Chrysanthemums, the whole exhibit extending to 125ft in length and about 4ft broad. We would especially draw attention to this firm's set of Cactus flowered Geraniums (Pelargoniums) which are absolutely novel and very pretty. They are Cactus Beauty, rosy carmine, semi-double; Cactus Gem, a sweet rose-pink, single; Cactus King, a semi-double, markedly fluted and deeper coloured than Beauty. Cactus Queen is intermediate between King and Beauty. These, we may add, are of the "Fire Dragon" type, the brilliant scarlet variety that was sent out a year or two ago. The whole display was wonderful in extent, beauty, and variety. (Gold Medal.)

Mrs. John Russell, Richmond, staged Apples, fruits, and a group of evergreen shrubs. (Silver-gilt Medal.)

Messrs. Geo. Boyes and Co., Aylestone Nurseries, Leicester, set up Tree Carnations in pots, and also as cut blooms. These were specially fine, and we hope to have more to say of them. (Silver-gilt Medal.)

From Messrs. J. Ambrose and Son, Cheshunt, came a large display of Palms, Roses in pots, Carnations in variety, Cyclamens, Ericas, Lily of the Valley, Crotons, and Azalea mollis, the whole being nicely arranged, though perhaps it would have looked better in a smaller space. The same exhibitor had fine bunches of the new Melton Constable Grape. The bunches were good in colour and berry, though the bloom had departed, evidently through constant exhibiting. (Large Silver Medal.)

Apples in dishes also came from J. Peed and Son, of West Norwood, London, S.E., and they also set up a large table of Lorraine and Turnford Hall Begonias. This was an immense and graceful display. (Silver-gilt Medal.) Messrs. Cheal and Sons, Crawley, set up a display of very handsome Apples. (Silver-gilt Medal.)

One of the prettiest groups in the Palace was that comprising the winter-flowering Begonias from J. Veitch and Sons, Limited, Chelsea. Here and there was placed a finely formed Gesnera (Nægalia exoniensis with crimson leaves. (Gold Medal.)

Messrs. Cutbush and Son, Highgate, London, N., Lobelia tenuior, Tree Carnations, Alpines, and evergreens. Their berried Pernettyas were charming subjects; so, too, was Primula megasæfolia, with lilac flowers; Egerion philadelphicus, Chrysogonum virginicum, Crocus Damascenus, and Campanula muralis major. A varied and interesting display. On another stand they had an immense quantity of seasonable greenhouse plants—Ericas, Spiræas, Liliums, &c. (Gold Medal.)

Messrs. Thomas Rochford and Sons, Limited, Turnford Hall, displayed in no mistakeable manner the development of the retarding art. Their exhibit would have been impossible a decade ago, and it comprised Liliums auratum, L. longiflorum, L. tigrinum, splendens, speciosum album, s. rubrum, and tancifolium roseum; while Spiræas, Azalea mollis, and a grand display of Lily of the Valley were other features. (Gold Medal.)

From Messrs. Gregory and Evans, Longlands Nursery, Sidcup, came a nice table of Ericas, which included E. gracilis

nivalis, E. gracilis autumnalis, also E. hyemalis, and E. h. alba, all beautifully grown and well developed. (Large Silver Medal.)

Mr. Pattison, of Streatham, showed his patent lawn horse-shoes; and "Lawes," together with the Ichthemic Guano Co., sent samples of their manures.

Royal Horticultural, Drill Hall, November 10th.

An excellent display of Chrysanthemums, Orchids, Zonal Pelargoniums, Ferns, stove and greenhouse and hardy plants was made, in addition to which, autumn foliage was used to decorate some of the exhibits.

Fruit and Vegetable Committee.

Present: Geo. Bunyard, Esq. (in the chair); with Messrs. J. Cheal, H. Esling, S. Mortimer, A. Dean, J. McIndoe, G. Kelf, H. Markham, G. Reynolds, G. Wythes, F. Q. Lane, J. Willard, G. Norman, J. H. Veitch, and W. Poupart.

Fruit was rather slack, the only award being given (against the rules?) to a new seedling Melon from Capt. Holford, Westonbirt, Tetbury, Glos. (gardener, Mr. Chapman). This was a green fleshed variety of good flavour.

Apple, Norfolk Beauty, which received an A.M. in October, 1901, and a F.C.C., December, 1902, was shown by Col. Harbard, Gunton Park, Norwich (gardener, Mr. Allen). The dozen fruits were large and of an old gold colour slightly flaked or speckled with russet. Mr. J. Ambrose exhibited the new Grape called "Melton Constable."

Orchid Committee.

Present: H. J. Veitch, Esq. (in the chair); with Messrs. J. O'Brien (secretary), E. Ashworth, W. H. White, W. H. Young, W. Boxall, H. J. Chapman, T. W. Bond, J. Charlesworth, A. A. McBean, F. W. Ashton, A. Hislop, J. Coleman, A. F. Moore, F. Wellesley, W. Cobb, H. Ballantine, and A. Bilney.

Messrs. Low and Co., Bush Hill Park, Enfield, were awarded a Silver Flora Medal for a collection of Orchids, in which *Cattleya Dowiana* (true); *C. labiata*, and *C.-L. Amesiana*—a fine white form with a mauve lip—were chiefly conspicuous.

J. J. Coleman, Esq., Gatton Park, Reigate (gardener, Mr. Bound), exhibited a large group of remarkably well grown *Cattleya labiata*, with a few *Cypripediums*, *Vanda cœrulea*, *Cymbidium Tracyanum*, and *Dendrobium Phalaenopsis*—the whole being artistically set off with plants of *Asparagus Sprengeri*, and Maidenhair, (Silver Flora Medal.)

J. Bradshaw, Esq., The Grange, Southgate (gardener, Mr. Whitelegg), had a pretty and effective little group of *Cattleyas* and *Oncidium*s, which received a Silver Flora Medal.

An Award of Merit was given to L.-C. Wrigleyi, Veitch's variety—a deep crimson purple variety, between *L. anceps* and *C. Bowringiana*.

H. L. Bischoffsheim, Esq., The Warren House, Stanmore, Middlesex (gardener, Mr. Ellis), staged a collection of *Cattleya labiata*, *Oncidium*s and *Cypripedium*s (Silver Banksian Medal).

Mr. A. A. Peeters, Brussels, received a Silver Flora Medal for some fine hybrid *Cattleyas*, in which a very large and highly-coloured form of *Lælio-Cattleya Wrigleyi* received an Award of Merit; also, *C. St. Gilles*, a deep coloured form. *Odontoglossum Waltoniense*, in a much improved condition, was shown by W. Thompson, Esq. (gardener, Mr. W. Stevens). It received a F.C.C. in January last.

S. Clayton, Esq., Wylam-on-Tyne, sent three large plants of *Calanthe*, with enormous bulbs and leaves, and fine sturdy trusses of blossom. (Cultural Commendation.)

F. Wellesley, Esq., Westfield, Woking, exhibited a strong plant of *Cypripedium Ville de Paris*, a large flower of the insigne type, to which an Award of Merit was given.

A First-Class Certificate was given to *Lælio-Cattleya Bletchleyensis* var. "Ruby King," a large ruby red variety, shown by Baron Schröder, The Dell, Egham.

E. Ashworth, Esq., Harefield Hall, Wilmslow, Cheshire, exhibited *Cypripedium Fulshawense* (Boxalli \times insigne Harefield Hall var.). It is a fine hybrid with large dorsal sepal and highly-coloured petals and lip. (Award of Merit.)

Messrs. Charlesworth & Co., Bradford, were awarded a Silver Flora medal for a select group of *Cattleyas*, *Odontoglossums*, *Cypripedium*s, &c.

Sir F. Wigan, Clare Lawn, East Sheen (gardener, Mr. Young), exhibited a fine plant of *Cattleya labiata Amesiana*, with white petals and mauve-lilac lip; also the rare *Cypripedium Muriel Holington*.

Floral Committee.

Present: H. B. May, Esq. (in the chair); with Messrs. G. Nicholson, C. T. Druery, J. Walker, Amos Perry, J. Jennings, Wm. Howe, G. Reuthe, C. R. Fielder, Chas. Dixon, Ch. Jeffries, H. J. Cutbush, C. E. Pearson, C. E. Shea, W. P. Thomson, E. H. Jenkins, W. J. James, J. W. Barr, F. Page Roberts, E. Mawley, and R. W. Wallace.

Chrysanthemums formed the chief feature of the exhibits submitted to this committee. Messrs. W. Wells and Co., of Earlswood, secured Award of Merit for two varieties, viz.: "W. A. Etherington," a beautiful massive blossom of a silvery mauve. It grows 4ft high, and may be described as a large Viviani Morel; and "Kitty Bourne," a single, of bright golden yellow, very free flowering, and useful for cutting. In addition, Messrs. Wells were awarded a Silver Flora

Medal for their fine collection of incurved Japanese, singles, and decorative varieties.

Mr. F. W. Smith, of The Hollies, Weybridge, exhibited a collection of single-flowered Chrysanthemums of various colours, set off by ornamental Gourds, edible and poisonous Fungi, and autumn foliage.

From Lady Plowden, Aston Rowant House, Oxon (gardener, Mr. W. H. Clarke), came a very fine collection of single and decorative Chrysanthemums, in which some extremely fine blossoms were conspicuous. (Silver Banksian Medal.)

Mr. J. T. Bennett-Poë, Holmewood, Cheshunt (gardener, Mr. Downes), exhibited four pots of *Nerines*, and secured an Award of Merit for "Mrs. Moore," a deep blood crimson variety; and for "Miss Woolward," a beautiful salmon pink with a deeper line down the centre of each petal.

Messrs. Hill and Son, of Edmonton, exhibited a fine collection of Ferns, in which there were some large and beautifully grown specimens of *Asplenium Nidus*. Amongst the others were some good plants of the remarkable *Acrostichum crinitum*, *A. viscosum*, *A. scandens*, *A. tomentosum*, and *A. sorbifolium* (Silver Flora Medal). Messrs. J. Ambrose and Son, Cheshunt, Herts, staged a group of pot-grown Roses, set off with Lily of the Valley, *Astilbe japonica*, *Crotons*, &c.

Messrs. Cutbush and Son, Highgate, had an interesting collection of dwarf trees and shrubs, hardy and rock plants, &c. Mr. J. Russell, of Richmond, secured a Silver Banksian Medal for a fine collection of beautiful flowered and berried trees and shrubs.

Messrs. W. Bull and Sons, Chelsea, had a group of very rare and select stove plants and Selaginellas, including *Ceropegia Woodii*, a creeping plant with roundish silvery leaves; *Æchmea Weilbachii*, *Selaginella africana*, *Maranta insignis*, and *M. picta*. A very effective collection of coloured leaved *Acers*, *Berberis*, *Prunus*, *Oak*, &c., came from Messrs. J. Cheal and Sons, Crawley. Mr. G. Reuthe, Keston, Kent, staged several specimens of *Nerines*, nearly all garden forms. A grand and glowing collection of Zonal Pelargoniums occupied the centre of the hall (Silver Banksian Medal). Mr. George Prince, Oxford, exhibited a charming collection of cut Roses, and received a Silver Banksian Medal.

Miss Adamson, South Villa, Regent's Park (gardener, Mr. G. Kelf), occupied nearly half of one side of the Hall with a first-rate collection of specimen Chrysanthemums, Palms, *Crotons*, *Dracœnas*, *Dieffenbachias*, *Poinsettias*, *Arums*, and *Begonia Gloire de Lorraine*—all arranged effectively. (Silver Flora Medal.)

Messrs. T. S. Ware (1902), Ltd., Feltham, staged a large collection of hardy herbaceous flowers, amongst which *Gladioli*, *Tritomas*, *Pentstemons*, *Gaillardias*, *Lobelia cardinalis*, &c., were particularly fine for the season.

Southampton, November 3rd.

The annual exhibition was held in the Victoria Hall, and was a great success in every way. Cut blooms were the leading feature, so numerous and good in quality were they. The principal class was that for thirty-six Japanese in twelve varieties, staged in vases. As first prize the "Victoria" Memorial challenge trophy with £7 was offered. Five competed, making a good display. Mr. G. Hall, gardener to the Dowager Lady Ashburton, Melchet Court, Romsey, was the premier prize-taker, with large handsome blooms of *Mdme. P. Radaelli*, *Bessie Godfrey*, *Mrs. Lewis*, *General Hutton*, *W. R. Church*, *Mrs. Mease*, *Mdme. Carnot*, *Mrs. G. Mileham*, *F. S. Vallis* (this was adjudged the premier bloom of the show), *Mdme. Herwege*, *Marquise de Venosta* and *Calvat's Sun*. Mr. Dawes, gardener to Mrs. Ogilvie, Hambledon, Cosham, was a good second, with the following varieties in good condition:—*W. R. Church*, *Sir H. Kitchener*, *M. Hoste*, *Mrs. Greenfield*, *Pride of Madford*, and *J. R. Upton*. Mr. G. Hunt, gardener to Pantia Ralli, Esq., Ashted Park, Epsom, was third with a good set.

Mr. B. Henley, Woolston, with Gustave Henry and Mutual Friend won for three blooms each of any two white varieties. Mr. Dawes second with *Florence Molyneux* and *Gay Hamilton*. For eighteen not more than three of any one variety, Mr. Pearce, gardener to Mrs. Tragett, Ambridge Danes, Romsey, secured the leading award with good blooms of *Mdme. P. Radaelli*, *F. S. Vallis*, *Mrs. T. Bryant*, *Mrs. G. Mileham* and *M. Louis Remy*. Mr. A. J. Marsh, gardener to M. Hodgson, Esq., Morton House, Kingsworthy, Winchester, second; Mr. B. Henley third.

In the class devoted to amateurs, Mr. J. Love, Park Road, Cowes, Isle of Wight, was first; Mr. F. Chandler, Shirley, second. Single-flowered varieties, arranged in two vases for effect, were best shown by Mr. G. Ellwood, gardener to W. Myers, Esq., M.P., Swanmore House, Bishop's Waltham. For twenty-four Japanese in not less than sixteen varieties, four competed. Mr. B. Hollis, gardener to Major Chichester, Embley Park, Romsey, was first with good specimens. Mr. G. Hunt second; Mr. Dawes third. Japanese incurved were better represented than is commonly the case in this section. Mr. E. Hall was first with typical examples of *T. Carrington* and *Mrs. Weekes*. Mr. Dawes a close second.

Plants were not numerous, but good in point of quality.

For a group of Chrysanthemums arranged in a space of 10 feet by 6 feet three competed. Mr. C. Hosey, gardener

to J. D'Esterre, Esq., Elmfield, Southampton, won the premier award with dwarf plants carrying good blooms and well clothed with foliage. Mr. B. Henley second; Mr. T. Hall, gardener to Sir S. Montague, South Stonham, third. Plants suitable for conservatory decoration receive much encouragement here. For four Mr. Hoscy was first, freely flowered examples. Mr. Dymott was second. In the bush-trained plant class Mr. Dymott again won first place with good examples of free flowering varieties.

Miscellaneous plants were arranged for effect, as usual, in good taste here. Mr. E. Wills, Winchester Road Nurseries, Southampton, was first; Mr. T. Tylor, Queen's Road Nurseries, Freemantle, second; Mr. T. Hall third.

Miss Wills, Anglesea Place, Southampton, had the best ball and bridal bouquets, suitable flowers deftly arranged. For a centrepiece for table decoration Mr. Ellwood won the leading award with an arrangement of Cattleyas, &c. Mrs. R. H. Jeffery, Nursling, second, Mr. E. Ladhams third. The most tastefully-arranged vase of Chrysanthemums was one contributed by Miss Minnie Snellgrove, Oxford Road, Southampton.

Fruit was good in quality if not in quantity. For three bunches Grapes distinct Mr. W. Mitchell, gardener to J. Willis Fleming, Esq., Chilworth Manor, Romsey, won with clean well-ripened samples of Muscat of Alexandria, Mrs. Pinee and Alicante. Mr. G. Eastwell, gardener to L. Walker-Munro, Esq., Rhinefield, Lyndhurst, second. Vegetables were plentiful and good. For eight varieties Mr. Best, gardener to F. Leyland, Esq., The Vyne, Basingstoke, was premier prizewinner with a good collection. In a smaller class Mr. Ellwood won with good produce. Mr. Best second.

Plymouth, November 3rd and 4th.

The annual autumn exhibition was held in the Guildhall and was a great success. Entries were numerous, and the exhibits close in point of merit. The arrangements, as usual, were of the best, in the careful hands of Mr. C. Wilson, the energetic and experienced hon. secretary, assisted by an efficient committee.

Cut blooms formed the most important part of the show, therefore demand a prior notice. The principal class was for forty-eight Japanese in not less than twenty-four varieties, not more than two of one variety to be staged. Ten pounds were offered as the leading prize. Four entered, making a good display. The coveted honour was somewhat easily secured by Mr. F. S. Vallis, Bromham, Wilts, who staged large fully-developed, highly-coloured examples of the following:—Mrs. J. Lewis, F. S. Vallis, W. R. Church, Mdme. A. Rousseau, Valerie Greenham, Nellie Pockett, Brightness, Mrs. Bagnall Wild, Princess de Braneova, E. Molyneux, Kimberley, Australie, Mrs. Thorneycroft, Mdme. Herrewage, Mrs. J. Marton, Mrs. Mileham, M. Hoste, Elsie Fulton, Mdme. Henri Douillet, Sensation, Charles Longley, Mrs. Greenfield, Mildred Ware, Mrs. J. Bryant, Jean Calvat, Olive Milton, M. Louis Remy, Le Grand Dragon, S. T. Wright, T. Carrington, Calvat's 99, Ethel Fitzroy, General Hutton and Mrs. Coombes.

Mr. W. Drake, 44, Cathays Terrace, Cardiff, was a good second with an even set of good quality blooms, a trifle smaller than the winning stand. Mildred Ware, Mrs. E. Hummell, Mrs. Mileham, George Lawrence and Sensation were the most noteworthy. Mrs. G. Foster, Glendarrah Gardens, Teignmouth, was a close third, with slightly uneven blooms.

For twenty-four Japanese Mr. Vallis repeated his former success with a characteristic exhibit. Mrs. Lewis, F. S. Vallis, Lily Mountford, Mrs. B. Wilde, W. R. Church, Mdme. A. Rousseau and C. Longley were especially noteworthy. Mr. Brimicombe, gardener to J. R. Gulson, Esq., Teignmouth, was a capital second. Mr. Harding, gardener to T. Martin, Esq., Trevorleyn, Plympton, was third. Seven competed.

Japanese incurved had a class set apart for them, and which produced tolerably good results. Mr. Brimicombe, with neat blooms of The Wonderful and Princess, was the premier prize-taker. Mr. Foster second with loosely-formed examples. Mr. R. Mairs, gardener to Sir J. Shelley, Shodbrooke Park, Crediton, third. White-flowered Japanese (six blooms of one variety) made a good display. Mr. Mairs, with typical examples of Mrs. J. Lewis, secured the leading award. Mr. Brimicombe followed with the same variety. Mr. Foster, with Mdme. Carnot, secured the third place.

For six any other colour there was a brisk competition, General Hutton winning; Mr. Hardinge, gardener to T. Martin, Esq., Plympton, second with Mrs. Mease; while Mr. F. S. Vallis secured the remaining prize for Mr. Foster.

Single-flowered varieties were staged in vases, three sprays of twelve varieties; they were but moderate. Mr. F. Q. Clatworthy, gardener to F. Bradshaw, Esq., Lipton Park, was the most successful. Mr. Damerell, gardener to S. H. Phillips, Esq., Mannamead, second.

In the classes confined to a radius of fifteen miles from Plymouth, there was a brisk competition. For twenty-four

Japanese in not less than eighteen varieties, Mr. Harding, with a grand set, won the premier award. Mr. H. Dould, gardener to G. F. Winnicot, Esq., Rockville, was second in a keen competition.

For twelve distinct, Mr. J. C. Boulds, 6, Albemarle Villas, Stoke, was an easy first prize winner, with capital examples of W. R. Church, Lord Ludlow, Miss A. Byron, Miss Elsie Fulten and J. R. Upton as the most noteworthy. Mr. Harding was a good second. Mr. Boulds followed up his previous success by securing leading honours for six Japanese with a good set.

Plants were not numerous, but good in quality. For a group of Chrysanthemums arranged in a semicircle, with foliage plants at the back, there were three competitors. Mr. R. G. Thorn, gardener to Mrs. Upton, Cottrell Dormer, Stoke, was first with exceptionally healthy plants, carrying high-class blooms. Mr. J. Hoskins, gardener to Dr. Aldous, Charlton House, Mannamead, second with a capital arrangement, but with much smaller blooms.

For a group of miscellaneous plants, to include Orchids and Chrysanthemums, three entered, making a bold display in the body of the hall. Messrs. John Webber and Sons, Vinstone Nursery, Plymouth, secured the leading award with a capital arrangement (in a square) of Orchids, Palms, Crotons, Chrysanthemums, Begonias, and Carnations, all effectively blended. Mr. Selby, gardener to Admiral Parker, Delamore, Cornwood, second; Mr. Thorn, third. Wreaths, bouquets and a complete floral display was a distinct gain to the show, so well were they represented. Messrs. J. Webber and Sons had also an effective group of Orchids, comprising Cattleyas, Cypripediums and Odontoglossums in variety, and for which they received the premier award.

Fruit and Vegetables, too, were a fine display. Space, however, forbids a detailed account.

Cardiff, November 4th and 5th.

In the Park Hall the annual show was held, and was the most successful of the series yet held. Liberal prizes and good management will, as a rule, produce satisfactory results, certainly this was the case here. Mr. H. Gillett is an experienced secretary, ably assisted by an efficient chairman of committee.

Cut blooms were plentiful. The leading class was that for eight vases (three blooms in a vase), distinct varieties of Japanese, staged on stems, with Chrysanthemum foliage only. Mr. G. W. Drake, 44, Cathays Terrace, Cardiff, was the most successful, staging high-class blooms of the following varieties:—Mr. Lewis, Mrs. Barkley, W. R. Church, Duchess of Wellington, Charles Davis, Mdme. P. Radaelli, Mdme. Herrewage and Mrs. Mileham. Mr. J. Duff, gardener to Mrs. Williams, Newport, second with an attractive set; Mr. G. Williams, Manor House Nurseries, Cardiff, third. In the class for twelve Japanese, distinct, Mr. Drake was again first with fully-developed blooms of F. S. Vallis, George Lawrence, Mrs. Mileham, Mdme. P. Radaelli, C. J. Salter, Matthew Smith, Sensation, Bessie Godfrey, Mrs. Lewis and W. R. Church. Mr. H. Townsend, gardener to H. Pitt, Esq., second, Mr. G. Williams third.

For twenty-four incurved Mr. Drake won the premier position with neat, medium-sized examples of the following:—Mrs. Egan, Mrs. Judson, Edith Hughes, Louisa Giles, Mrs. Crooks, Lady Isobel, Mdme. Ferlat and C. H. Curtis. Mr. Townsend a good second with Hanwell Glory, Nellie Threlfall and Mdme. Ferlat in good form.

Classes were provided for amateurs and gentlemen's gardeners, which produced keen competition. The leading class was for twenty-four Japanese in not less than eighteen varieties, for which the "Courtes" Cup and a money prize was given. Mr. E. A. Parsons, gardener to Mrs. J. F. Pain, Cardiff, secured the coveted award with typical examples of the following varieties:—Mdme. P. Radaelli, W. R. Church, Mrs. Lewis, Mrs. Mease, F. S. Vallis, Mildred Ware, Bessie Godfrey, Mrs. Barkley and Ethel Fitzroy. Mr. John Dunn, gardener to Mrs. Williams, Brynglas, Newport, second, with good blooms of popular varieties. Mr. H. A. Allen, Penarth, a good third. Seven competed for twelve Japanese. Mr. A. F. Hill, Cardiff, won quite easily the premier position with F. S. Vallis (premier bloom in the show), Mrs. Lewis, M. Louis Remy, Mrs. Mileham, Mrs. Barkley, Mrs. Thirkell and Mdme. Herrewage. Mr. Edwards, Severn Road, Cardiff, second; Mr. H. Frazer, gardener to D. Adsett, Esq., The Hollies, Penarth, third.

In a class for twelve Japanese in not less than four varieties open to those not employing a regular gardener, a silver challenge cup was offered, and for which seven competed. Mr. Hill followed up his previous success with a pleasing set. Mr. Edwards, second, with Mr. C. S. Arthur, 149, Albany Road, Cardiff, third. In this section Mr. E. A. Parsons won the first place for twelve incurved blooms. For five any one white-flowered Japanese variety Mr. W. Hatherdale, Manor Cottage, Cardiff, secured the pride of place with Mrs. Lewis in really good order. Mr. Edwards, with Mdme. Carnot second. For

a similar number any colour except white, Mr. Allen with Mrs. Mileham secured the leading place quite easily. Mr. Edwards following with Mrs. Mease. Single-flowered varieties were well represented. For half a dozen bunches, distinct, Mr. T. Bindon, gardener to Dr. T. Wallace, Cardiff, was an easy first with handsome examples of Captain Allsop, Emily Wells, Mary Anderson, Mrs. G. W. Forbes, Felix and Ewan Cameron. Mr. T. Williams, 58, Neppock Street, Cardiff, second. Mr. Bindon won also for the best arranged vase of single varieties.

Cottagers staged marvellous blooms, considering the convenience at command. For six Japanese, Mr. John Morgan, 11, Redlaver Street, Cardiff, was first, showing Bessie Godfrey, Mrs. Barkley and Mrs. Lewis in prime condition. Mr. E. Jones, 41, Cecil Street, Cardiff, won for six incurved.

Plants were good in quality, if not numerous. Mr. W. Treseder, Cardiff, won for a group of Chrysanthemums arranged with foliage plants, with plants carrying high-class blossoms, not too crowded. Mr. G. Williams, second. For two trained specimens Mr. Bindon staged Mme. Carnot and Mrs. Emmerton, each carrying thirty high-class blooms over deep green leaves. Mr. Treseder had the best for bush-trained plants in Colonel W. B. Smith, Nellie Pockett, Phœbus, and Kate Broomhead. Mr. G. Muse, 22, Wellington Street, Cardiff, second.

For a group of 50 square feet confined to amateurs, Mr. A. Brown, gardener to J. Howell, Esq., Cardiff, was first with dwarf plants carrying good blooms.

Bouquets, wreaths and crosses were—as they always are—a feature of the show. Messrs. Treseder, John Crossling, Penarth, Mr. W. Baggeson, and Messrs. Ellis and Son, Cowbridge, secured the leading prizes.

Exhibits "not for competition" were numerous. Gold medals were awarded to Messrs. J. Cypher and Son, Cheltenham, for Orchids; to Mr. John Basham, Bassaleg, Newport, for fruit; and Mr. W. Treseder, Cardiff, for Roses and Dahlias. Silver medals were also awarded to Messrs. Clibran, Altrincham, for Chrysanthemums, etc.

First-class certificates were given to Chrysanthemums Mrs. J. Dunn (a pure white, long-drooping petalled Japanese—a great improvement on many modern varieties), and Maud du Cros (a huge flower with straw yellow outer florets shading deeper towards the centre), staged by Mr. H. J. Jones, Lewisham.

Highgate Chrysanthemum, November 4th, 5th, and 6th.

This show is now held annually in the Alexandra Palace on Muswell Hill, W., and is one of the chief in the neighbourhood of London. Mr. W. E. Boyce, who is secretary, devotes a great deal of his time to the business of the show, and arranged the exhibition tastefully. The leading classes are provided with handsome money prizes, while silver cups and medals are somewhat freely bestowed. In the two vase classes, No. 1 and No. 2, there were some really magnificent blooms staged, and these we notice hereafter. The groups, as is usual at shows generally, were, in our opinion, monstrous, and tasty groups have yet to be developed. Could a class not be arranged for both flowers and plants together, so that the public might have something really beautiful to enjoy?

Two new Chrysanthemums were certificated, viz., Harry Shrimpton, Jap, of good size and form, petals narrow and drooping, and coloured a rich golden-chestnut; and incurved, Miss Edith Holding, already described in our pages, both from Mr. W. Seward, The Firs, Hanwell.

The display of fruit and vegetables was creditable, though limited. Cottagers furnished a number of really excellent plants in the orthodox groups, and so keen are some of them that we heard from Mr. Boyce of one who took a quilt from his bed to shade the plants in order to keep them back a day or two for this show! That exemplifies the fascination that floriculture holds. Decorations were again a noticeable feature.

This Highgate society is well endowed with leading Chrysanthemum lights in Messrs. T. Bevan, D. B. Crane, J. McKerchar, G. Saunders, T. L. Turk, A. Taylor, and J. H. Witty, whose names are well known wherever "the golden flower" is especially cultivated. The president is C. F. Cory-Wright, Esq., J.P., D.L., and two of the patronesses are the Baroness Burdett-Coutts and Lady Nina Balfour. Lord Mansfield was president last year.

CLASS I.—TWELVE VASES JAPANESE BLOOMS, DISTINCT, 5 blooms each. Prizes: Silver cup and five guineas, first; five guineas, second; and three guineas, third. Mr. W. Ring, gardener to J. Warren, Esq., Capel House, Waltham Cross, was first, and his set included the following: Lord Salisbury, Mrs. Mease, Mrs. T. W. Pockett, Marquise V. Venosta, Mermaid, Mafeking Hero, M. Louis Remy, Madame Chenon de Léché, Australie, J. J. Thorneycroft (exceedingly good), Madame Carnot, and F. S. Vallis (very handsome). The second prize fell to Mr. G. J. Hunt, from Ashted Park, Epsom, who won the leading prize (a challenge cup, winning it outright) at Croydon the same week. His blooms here appeared to lack in finish. They were Bessie Godfrey*, Madame P. Radaelli, Miss M. Ware; Miss Elsie

Fulton, Mr. G. Carrington*, Duchess of Sutherland, Matthew Smith, The Princess, Marquise V. Venosta, Mrs. A. K. Knight, Godfrey's Pride*, and Madame Herreweg*. The best are those marked *. Mr. J. Sandford, gardener to G. W. Wright-Ingle, Esq., Wood House, North Finchley, followed closely for third, and had well-finished flowers of moderate size. The finest examples were Miss Elsie Fulton (a gem), Chas. Longley (very rich and beautiful), Geo. Mileham (a trifle loose), Matthew Smith, and Madame Paolo Radaelli (of good depth and fine form). Mr. J. Kirkwood, of Grass Park House, Finchley, also staged, but his blooms were too far spent. He had Mrs. Greenfield (good), also Duchess of Sutherland and Mrs. G. Mileham.

CLASS II.—SIX VASES OF INCURVED BLOOMS, DISTINCT. Three entries were staged, and the quality was high. Mr. J. Sandford, of Wood House, was placed first, and his six comprised Perle Dauphinoise, Lady Isobel, C. H. Curtis, R. C. Kingston, Globe d'Or, and Jeanne d'Arc. The second award fell to Mr. A. Jones, Hadley Manor, Barnet, his best being C. H. Curtis; and third, Mr. G. J. Hunt.

CLASS III.—GROUP OF CHRYSANTHEMUMS. Year after year we complain of the tiresome, ugly Chrysanthemum groups, whose only purpose seems to be to fill the allotted space. They are abominations that ought to be swept from the exhibition hall to the most hidden recesses of the private gardens or establishments from which they emanate. When will "art" be requisitioned in the arranging of them? The winners here were: first, Mr. T. L. Turk, Southwood House, Highgate; and second, Mr. C. H. Martin, of Raymead, Hendon.

TABLE DECORATIONS.—Some sweetly dressed tables were set up, and there was considerable diversity. Mr. D. B. Crane (Class 5) surpassed himself, and evidently did not intend to leave any doubt about the adjudication this time. He led with a table set with rich yellow pompon and decorative Chrysanthemums, with here and there a dash of crimson from Berberis sprays and Ampelopsis, Smilax and Asparagus being effectively employed. In the next class (6) Mr. G. Shrimpton was first, using white and crimson; and Mr. Crane was second, having his scheme in apricot and bright yellow, which indeed was rich and very fine. In Class 7 six entered (centrepiece), and D. M. Oliver was first with a mean set-up, the flowers being Source d'Or with Asparagus plumosus. The third prize epergne was the best in the opinion of the majority of visitors. Buttonholes and hand bouquets seemed well represented. For the gardeners' hand-basket (Class 12), Mr. Turk led.

VASE CLASSES.—So many as six vases of pompons were on show, and the leaders were Messrs. Turk and E. H. Chitty (Cholmeley Lodge) in this order. Also Turk and Aldridge in another class. The blooms were clean and good. For two vases of Japs. Mr. Chitty was first; J. Adams, Hillside, Fitzroy Park, second; and Mr. Turk third, the quality being high. For one vase of six Japanese Chrysanthemums (Class 21), Mr. W. Austin, North View Road, Hornsey, was awarded premier place.

CUT BLOOMS.—For twenty-four Japs, in eighteen varieties, Mr. Turk led against five others, and his choicest were Mrs. G. Mileham, Mrs. Greenfield, and Godfrey's Pride. Mr. S. North was second, with a good Lord Alverstone. Mr. J. Stevens was third.

In the succeeding class, for a similar entry, but confined to members within a local area, the lead went to Mr. W. J. Bennett, The Highlands, New Barnet who had a very fine exhibit. Sensation was well shown, and also Nellie Pockett, M. Louis Remy, and Lord Ludlow. Mr. J. Brookes, Totteridge Park, made a close second, and Mr. H. Parr third with a good W. R. Church. For one Jap (Class 31) Mr. A. Jones was first with F. S. Vallis, and J. Sandford second with Miss Elsie Fulton. The flowers in the leading classes under this section were of good average quality. For a dozen as cut from plants, with their own foliage, Mr. A. Simmonds, St. Dunstons, Hendon, was an easy first; and second, Mr. J. Kirkwood, but much inferior. For the twelve Anemone varieties Mr. Sandford beat W. Aldridge, of Springfield House, Palmer's Green. These gave a nice variety to the exhibition. Messrs. J. Frost and J. Kirkwood were so placed in Class 39 (members only, twelve Japs), with excellent flowers—a credit to Highgate.

FRUIT WAS shown on two tables. Mr. H. Parr, of Trent Park, led for six dishes of Apples, Mr. J. Kirkwood second; there being seven entries. Some exceedingly handsome Tomatoes were on view, Mr. Kirkwood leading. For six dishes of Pears Mr. Parr was alone. He staged Bergamot Espere, Beurré Superfin, Duchesse d'Angoulême, Glou Moreau, Doyenné du Comice, and Catillac. For three bunches black Grapes Mr. Parr beat J. Kirkwood; and third, J. Sandford. For white the order was Parr, Sandford, and A. Jones. For the best collection of kitchen-garden produce (Class 56) the first and silver-gilt medal fell to Mr. R. Tomlin, Red Lion Hill, with excellent vegetables. For a collection of vegetables (Class 66), eight kinds distinct, 20s. first prize, Mr. J. Kirkwood was foremost, and Mr. J. Jones second.

NON-COMPETITIVE EXHIBITS.—Mr. H. Lovegrove, gardener to H. Spicer, Esq., 14, Aberdeen Park, Highbury, staged a group of very creditably grown Cypripediums—C. Spicerianum, and received a silver medal. Messrs. Henry Williams and Sons,

Fortis Green, had a bronze medal for an exhibit of Chinese Primulas, strongly flowered.

Messrs. B. S. Williams and Son, Upper Holloway, London, N., had a group of choice subjects, including Begonia Gloire de Lorraine, Hydrangea Hortensia variegata, Cineraria maritima aurea, Erica hyemalis alba, Chrysanthemum Soleil d'Octobre, and some very useful Cordylines. Gold medal.

A silver-gilt medal for a table of Chrysanthemums was accorded to Mr. G. Saunders, 13, Victoria Cottages, Archway Road, Highgate; and for decorations Mr. J. Williams, from Ealing, had his rural table decorations.

Messrs. Cannell and Sons, from Swanley, brought Zonal Pelargoniums, which they staged in bunches. It would have gladdened their hearts to have heard the eulogiums poured out by the Highgate visitors. The best varieties were Lady Roscoe, Mrs. Brown Potter, Lord Curzon, Cerise, Prince of Orange, Winston Churchill, Lady Tennyson, Mary Beaton, and Barbara Hope. They had also Chrysanthemums. A gold medal was awarded. Messrs. Wells and Co., Limited, Earlswood, Surrey, staged a few Chrysanthemums.

Weybridge, November 5th.

The fifth annual show was held in the Village Hall, and was remarkable for the excellence throughout the various classes. Nowhere have we seen finer Japanese blooms this season than here. Cut blooms were numerous and good. The greatest interest centred in the class for twelve Japanese distinct, for which a silver cup brought from Japan on purpose was offered, and for which five competed. The coveted honour falling to Mr. J. Lock, gardener to Sir Swinfen Eady, Oatlands Park, Weybridge, for a magnificent set; all were of full size, beautifully fresh, and perfectly staged. The varieties were Mrs. F. Vallis, Madame Nagelackers, H. Stowe, Henry Perkins, F. S. Vallis, Bessie Godfrey, Mildred Ware, Miss O. Miller, General Hutton, W. R. Church, G. Lawrence, Mrs. Mileham, and Edwin Molyneux very fine; Mr. T. Stevenson, gardener to E. Mocatta, Esq., Addlestone, was a good second, staging Sir H. Kitchener, Bessie Godfrey, and General Hutton, especially well. Mr. W. Shute, gardener to Mrs. Machin, Oatlands Park, third.

For eighteen Japanese distinct, Mr. Lock was again successful in carrying off the premier award for a charming display, Ethel Fitzroy, H. Perkins, Mrs. F. S. Vallis, Mrs. Mease, Mdme. Carnot, Mafeking Hero, Mildred Ware, Bessie Godfrey, E. Molyneux, and J. R. Ayston, as the best; second, Mr. Stevenson; third, Mr. T. Carryer, gardener to A. G. Meissner, Esq., Weybridge. Incurved varieties were well represented. Mr. Lock won the premier position for twelve distinct with medium sized, well-finished examples of Mrs. Crooks, Lady Isobel, Miss N. Southam, F. Palmer, Pearl Palace, C. H. Curtis, Louisa Giles, Madame Ferlat and Ialene. Mr. H. Buckmaster, gardener to F. W. Smith, Esq., Oatlands Park, second, with Mr. T. Carryer a close third.

Reflexed varieties were really well staged on this occasion. For twelve, not less than nine varieties, Mr. Carryer, with full-sized examples of Miss F. Lunn, Cloth of Gold, Golden Christine, Clara Jeal, Pink Christine, and Mrs. Forsythe. Mr. C. Beal, gardener to J. R. Anderson, Esq., Weybridge, second.

Pompons were much better represented than usually, Mr. Carryer winning for six bunches distinct, three blooms to a bunch, staging well-developed blooms of Mdle. Marthe, W. Westlake, Prince of Orange, Osiris, Pygmalion, and Mdle. Elise Dordan. Mr. F. Cawte, gardener to E. Luxmore, Esq., Weybridge, second. Single flowered varieties were splendidly staged. For six bunches, Mr. W. C. Pagram, gardener to — Courtenay, Esq., Weybridge, was an easy first with grandly developed blooms of The Bride, Lady Churchill, Edith Pagram, Elsie Neville, Maud Robinson, and Kate Williams; Mr. T. Stevenson, second; Mr. S. H. Levi, third. One class was provided for Japanese in vases, twelve distinct, three blooms of each. Mr. W. Johns, gardener to A. R. Cobbett, Esq., Weybridge, won with a very narrow margin the premier place; Mr. Buckmaster second.

Groups of Chrysanthemums were a feature of the show, so well were they represented. Mr. Pagram won the premier award with an exhibit possessing much taste. Not only were Japanese varieties used in large blooms, but single flowered plants and pompons, especially Primrose League and Snowdrop, were utilised to make this exhibit what it was—thoroughly representative of the Chrysanthemum. Mr. W. Shute second. In a smaller group Mr. C. Beal, gardener to J. Anderson, Esq., Weybridge, was first in a most creditable manner. For one plant, Japanese, not to exceed 4ft in height, to have not less than twelve blooms, Mr. Pagram was first with Ryecroft Scarlet. Mr. Prothero, gardener to Miss Green, Weybridge, second.

For a collection of cut Chrysanthemums, arranged for effect in a tray 3ft by 2ft 6in, Palms, Ferns, or other foliage allowed, Mr. Prothero was the most successful with handsome Japanese flowers, lightly arranged with Ferns, Grasses, &c.; Mr. Pagram second. For six Japanese, any one variety in a vase, Mr. Stevenson, with Mrs. Mileham, won first place, followed by Mr. Carryer.

For six any one incurved variety in a vase, Mr. Buckmaster, with Hanwell Glory, was first, Mr. Carryer, with Duchess of Fife, second.

Windsor, November 6th.

In the Albert Institute the annual exhibition was held. If the entries were not quite so numerous as in the past, the quality left little to be desired. Mr. C. Sainty, hon. secretary, had all the arrangements well in hand. For a group of Chrysanthemums and foliage plants arranged in a semicircle there were three competitors, Mr. W. Cole, gardener to Mrs. E. B. Foster, Clewer, won first place somewhat easily with dwarf plants carrying good blooms, not too stiffly or too thickly arranged. Mr. W. Lane, gardener to Sir E. Durning Smith, second, with fine blooms on dwarf plants, too crowded in arrangement. For a smaller group confined to amateurs only Mr. J. T. Young was the most successful, with plants adapted for the purpose.

Cut Blooms: Japanese.—For eighteen distinct arranged in a space 5ft by 3ft, with the addition of any foliage, a pretty effect was produced. Mr. G. Lane, with handsome blooms of Harry Barnes, Australie, and Nellie Pockett, lightly arranged on stems 9in to 1ft long, and over a base of Maidenhair Fern. Mr. W. Hearn, gardener to Mr. Gerald Goodlake, second; Mr. D. Hayler, gardener to Lady Dalton Fitzgerald, third. For six vases, three blooms any one variety, there were three competitors. Mr. W. Jinks, gardener to L. J. Drew, Esq., won first prize with really fine blooms of Mrs. T. W. Pockett, Mrs. Mileham, W. R. Church, and Rev. W. Wilks; Mr. Lane, second, with slightly smaller; Mr. T. Jacobs, gardener to A. L. Wigan, Esq., third. For twelve incurved, and the same number of Japanese, a silver cup was offered as first prize, Mr. Wilson, gardener to Mrs. Christie, was easily first, with large, heavy, fresh blooms. Japanese: Mrs. Mease, Rev. Wilks, General Hutton, Mrs. Everton, W. R. Church, and G. J. Warren. Incurved: Louisa Giles, C. H. Curtis, Hanwell Glory, Nellie Southam, Mrs. Judson, Ialene, Lady Isobel, Duchess of Fife, Frank Hammond, Mrs. H. J. Jones, and Topaze Orientale; Mrs. G. Lane, second; Mr. Page, gardener to J. B. Fortescue, Esq., Dropmore, third. For twelve incurved distinct, Mr. Jinks, with large, neatly dressed blooms, was awarded first place. Mr. Baskett, gardener to E. H. Beckett, Esq., M.P., second. For six incurved, any one variety, Mr. Page, with neat even blooms of Empress of India, was first. Mr. Jinks, with large, somewhat rough examples of C. H. Curtis, second; Mr. Baskett, with small, yet pretty blooms of the same variety, third. Seven staged six Japanese, and one variety. Mr. Minty, with Bessie Godfrey in almost faultless condition, won the first place, followed by Mr. Jinks with Mafeking Hero, and Mr. Lane with Mrs. Mileham, in the order here given. The Duchess Dowager of Sutherland provided the prizes for twelve blooms any section, with not less than 12in of stem, with other natural foliage arranged in a basket or vase. For this was keen competition. The first prize was awarded to Mr. Jinks for magnificent blooms of F. S. Vallis, Mrs. Mileham, Mrs. Mease, Mafeking Hero, and General Buller, lightly, yet effectively arranged with Grasses, &c.; Mr. Lane, second; Mr. Page, third. Fruit and vegetables were well shown.

Devon and Exeter Horticultural.

This society's show was held on Nov. 6 and 7. The clear frost of the night ushered in a cheerful day, a day in which the flowers seemed to me to rejoice. Some friends sent fine collections of fruit and Chrysanthemums. The public owe much to a few people, who strive to give them a yearly treat of great merit. Our old friend, Sir John Shelley's gardener, Mr. R. Mairs, secured first place in a collection of thirty sorts of Apples. His exhibits are throughout of fine quality. The president of the society staged a nice collection of fruit. His gardener, Mr. Ellicott, is able to grow Grapes of perfect form and colour.

The Pears were not specially noteworthy, although some were fine. The fruit was not so good as that seen at Plymouth last week. Sir John Shelley and his neighbour, Sir J. D. F. Davie, took the collection prizes with some good samples. Most of the prizes went to Sir John Shelley and Sir J. D. F. Davie, the other prizetakers being Lord Poltimore, Poltimore Park, Exeter, and Messrs. Bannatyne, W. C. Cleave (Crediton), J. Ham (Cullompton), T. Kekewich ("Peasmore"), &c.

The circle group of Chrysanthemums, 10ft through, staged by Mr. J. Townsend's gardener was very greatly admired, and easily secured first prize. The foliage looked so clean and the blooms so well grown. Mr. Molyneux would not have had trouble in comparison at Exeter, with this exhibit at least. Mr. Brock was awarded second prize: a pretty lot, but some of the blooms looked as if the "drip" had been considerable, a little dirt here and there showing itself. Mr. Rowland, the gardener, however, recovered any loss of his reputation by winning Class 4. A group of choice plants, they were arranged with lightness from whatever point viewed. Although Mr. Heberden's gardener had a fine collection (which came in second), the heaviness and lack of variegation were apparent. There were too many good things of one kind, and too few Grasses and delicate-looking Ferns, &c.

For thirty-six Japanese Chrysanthemums, twelve sorts, three of each, Mr. F. S. Vallis, Chippenham (a grand lot), led; 2, G. Foster, Teignmouth; 3, H. M. Harrison, Barnstaple; 4, B. H. Hill.

Honorary exhibits came from Messrs. Robert Veitch and Son, Royal Nurseries, Exeter, who staged many good plants, and the Northern Star Potato. The sample was grown by Mr. Abrams at "Peasmore" this season; 1lb of seed produced 209lb. Dishes of Evergood, Sir Walter Raleigh, Devonian, General Buller, Sir John Llewelyn, and Up-to-Date Potatoes were also shown by this firm. Among new Chrysanthemums were F. S. Vallis, Ethel Fitzroy, C.I.V., Sensation, Marquise V. Venosta, Miss E. Douglas, Madame W. Rousseau. Choice shrubs included *Cedrus atlantica*, *Pernettyas*, Golden Irish Yew, an ochre-coloured shrub named *Glyptostrobus heterophyllus*, &c.

Mr. W. J. Godfrey was forward with his novelties.

Royal Horticultural of Ireland.

The winter show of this venerable society, held on November 4 and 5 in the Royal University, Dublin, created a disappointment in its meagre display of Chrysanthemums. However, visitors were agreeably surprised in finding such fine, magnificent fruit in evidence. In the competing plant class for Chrysanthemums no entries were received, hence no plants were in evidence, and that probably was an unique position for Dublin, if not elsewhere. Mr. McKellar, a veritable Sandow for cut blooms, again showed his strength in carrying off the cup for twelve vases of blooms in twelve varieties, and for twenty-four Japs in eighteen varieties a most creditable collection staged by Mr. O'Connor, gardener to A. Pim, Esq., Bellevue, Black Rock, who was second in the previous class, would have been hard to beat, although for him it was simply a walk-over. A few entries in the smaller classes, with those previously noted, saved the society from being flowerless so far as competing classes were concerned, and beyond a nice table of early flowering kinds staged by Watsons, of the Clontarf Nurseries, the distressful tale of the Chrysanthemum in Dublin for this miserable year is told.

Fortunately trade exhibits saved the situation so far as the show was concerned, Messrs. Alex. Dicksons, the Irish giants of Rosedom, having quite an exhibition to themselves in a long table, on which were arranged, amid small Palms and high-coloured little Crotons, a representative collection of seasonable fruit, amongst which Apples were pre-eminent. Near them, on a side table, the veteran Dublin firm of Sir James W. Mackey had a combined exhibit of fruits, vegetables, and foliage, and it was, and has been for years, a revelation of what this firm can do with vegetables from a decorative point of view. The courteous manager presiding over the Mackey exhibit called attention to a dish of rather wretched Potatoes, saying, "That's Northern Star." Humph! That's all. From Jameson's Nurseries, Sandymount, were some glorious wreaths and floral designs displayed at the back of a tastefully arranged miscellaneous group, and Mr. Caulfield's skilful work on the large stand put up by Chas. Ramsay and Sons, of the Royal Nurseries, Dublin, was much admired under the difficulty of a trying light from windows in the rear. The above trio of exhibits were recommended for gold medals by the judges, who likewise appreciated in the same manner a beautiful group put up by Mr. Campbell from the gardens of Lord Ardilaun. The filling of the Classes 10 to 38, comprising fruits and vegetables, was in the aggregate excellent, and without absorbing space in details all honour is due to those exhibitors in producing such results as were shown under the season's adverse conditions. Here and there fine splashes of colour were noticeable amongst the dishes of Apples, but again, great diversity of character was frequently seen in individual varieties. Warner's King was most prominent in the cooking classes, and King Pippin the more frequently shown in dessert dishes. This should mean something for the merits of both in a bad season. The brisk and urbane young secretary, Walter Keating, Esq., certainly deserved a gold medal as well as the exhibits and exhibitors recommended for such by the judges, for the manner in which his two days' work was carried out, the executive, with one exception, having apparently left him to his fate, and the fate of flower show secretaries is not always a particularly happy one, not excepting the Royal Horticultural Society of Ireland—so it has, at least, appeared to—K., Dublin.

Isle of Wight Horticultural.

The monthly meeting was held at Warburton's Hotel, Newport, on Saturday, November 7. There was a good attendance of members to hear a paper "On the Cultivation of Chrysanthemums" for the production of exhibition blooms, by Mr. J. H. Silsbury, of Shanklin. The subject was dealt with in a most masterly manner. Mr. Silsbury staged some grandly developed and finished blooms, prominent amongst which was a new Jap named after himself. It has long drooping florets and pleasing tints, which doubtless will become popular. Mr. Snook, West Hill, Shanklin, also staged magnificent blooms, the interest centring around a fine specimen Mrs. Barkley, the petals of which had been reversed to obtain the brighter colouring, anent which

operation comment was made. Mr. Snook also staged a bunch of the pretty *Salvia Betheli*. Mr. T. Colister, Steyne, Bembridge, staged a lovely display of Roses cut from open quarters, fine for so late in the season, and some well grown varieties of Apples. Mr. Brett, Mount Gardens, Yarmouth, had the pretty little Aster *Watsi* and *Schizostylis coccinea*. Mr. W. Tribbick had Chrysanthemum blooms, including a superb Madame Gustave Henri, *Salvia splendens*, and named varieties of *Bouvardias*. Two new members were elected. Next meeting will be held on December 5, when Mr. E. C. Goble, F.R.H.S., of Walcot Nurseries, Ryde, will lecture on Tomato culture.

Young Gardeners' Domain.

Chrysanthemum Culture.

November with us again, and what have we to make the conservatory and other houses gay but the Chrysanthemum? The Chrysanthemum is very useful, both in bush form and for large blooms, and though it will live under almost any treatment, it is one of the hardest to bring to perfection. The cuttings should be taken solely from the bases of the old stools, taking care not to get any from the stem of the old plant, or trouble will come by the plants continually forming buds when they should be growing. All cuttings should be taken the first week in December, putting five or six in 4in pots round the edge of the pot. Propagation should be performed in a pit or frame where heat could be turned on when necessary, keeping the temperature from 50deg to 60deg. One watering should be given, and this will suffice till the cuttings are rooted. It will also be found necessary to sponge all moisture from the glass every morning.

When rooted, which should be early in the New Year, air and water must be given with caution. Early in February the cuttings should be potted into 3in and 4in pots in a compost of fibrous loam (one-half) leaf soil, spent Mushroom dung, and sand. Little details must be looked into, such as having the pots well cleaned and drained. After potting, the plantlets should be placed again in frames, on ashes, and kept close for a few days till a move is noticed, then more air may be given. Early in April the plants should be sorted, and the varieties which are in the grower's opinion best for large blooms should be potted in 5in and 6in pots, in a compost of two-thirds good fibrous loam, broken about the size of a hen's egg, the remaining third to consist of leaf soil, Mushroom dung, ½in bones, and grit—these in equal parts. The plants should have less air for a week, and then be given as much as possible, avoiding draughts.

All plants intended for bush should, at the sorting time, be pinched and then kept close and shaded till they are breaking away nicely. They are then treated as the plants for large blooms; but the object must be to form bushy plants, therefore if necessary stop them again. The final potting should be given the first week in June. The pots used may be 8in and 9in diameter, and the compost may consist of one-half of rich fibrous loam, the other half to consist in equal parts of the following: Dried blood, leaf soil, wood ashes, lime rubble, crushed bones, and soot. The potting must be firmly done, and pots well drained and cleaned.

A nice sunny space must now be found where the plants can stand on ashes, and be made secure from high winds. A piece of slate must be placed under each pot to stop the roots from going into the ashes. When well rooted, they should have weak manure water twice a week, taking care always that each plant is dry before being watered. Most varieties will come into bud much better if stopped about the middle of June, or when they show a sign of making their natural break. The buds should then come towards the end of August, and will be showing colour in October, when they should be placed near the glass in a vinery or greenhouse. Feeding should be continued till the flower is half-expanded, then may be stopped. At this period a little heat turned on at night will keep the blooms from damping; also at this time the flowers will be infested with green fly and thrips, which pests must be destroyed with nicotine or XL All. It will be found that the bloom will not in any way be injured if it had a little stronger dose than usual. After fumigating, they are then fit for conservatory, or when fully out for cutting. —F. H. W.

TREE-FERNS AT THE MISSOURI BOTANICAL GARDENS were received from the Hawaiian Islands recently. The plants are thirteen to sixteen feet in height, and were sent in fine condition. They are quite an addition to the Fern dome.

CANADIAN FLORIST.—This is the name of a new trade paper, the twelfth number of which we have just received. It is a very small publication, and is not at present illustrated. It chronicles the doings of our Canadian kinsmen who are florists, and as there are 12,000 of them it ought to have a fair clientèle. The subscription is a dollar a year, and the publishing office is at 12, Richmond Street East, Toronto.



Hardy Fruit Garden.

PLANTING APPLES.—Apples should be planted chiefly as standards, bushes, and cordons. The usual size of orchard standards is usually 5ft to 6ft in stem, and these must be planted 20ft apart, at least. Half-standards are 2½ft to 4ft stems, and may be planted 12ft to 15ft apart. Orchard standards are worked on selected Crab stocks. Half-standards, too, are on this stock. The trees grow vigorously, hence the wider distances apart they should be planted. In addition some bushes and pyramids may be grown on this stock. Trees, however, which must be grown in a restricted space require to be grown on a stock which grows less vigorously, therefore the Paradise stock is the best, and bushes, pyramids, and cordons ought to be grown on this. The trees possess more fibrous roots, come into bearing early, and are more prolific. The soil best suited to Apples is a rich, rather adhesive loam, which should, previous to planting, be prepared to a depth of 2ft by trenching or deep digging. Add no manure to soil of this character. Should, however, it be necessary to plant where the soil is very light and poor it will be advisable to incorporate a little decayed material with the soil placed about the roots. The stations or holes for the reception of the roots ought to be wide, so as to admit the roots easily. In arranging the roots spread them out to their full extent, previously, of course, pruning back the injured parts. A prepared compost of a light and pliable character mixed with wood ashes is best to cover immediately over the roots, spreading it from the stem outwards. Spread a mulching of strawy material over the roots, and stake standard trees immediately.

PEARS.—Pears, like Apples, are planted as standards, half-standards, bushes, and cordons. Pears are worked on two kinds of stocks. For growing as standards in orchards, and as bushes, pyramids, and trained for espaliers and walls, the Pear stock is suitable. Trees may be grown larger on this stock, but they do not come into bearing quite so early. For growing in restricted gardens, where trees can have less room allowed them than in the larger area of the orchard, the Quince stock is the best. All the varieties of form may be procured except the standard, which is only to be had on the Pear stock. Trees on the Quince stock, in addition to being adapted for restricted space, also come into bearing earlier, and are very prolific. Bushes and pyramids may be planted as closely together as 4ft to 6ft, occasionally root-pruning them while there is a tendency to over-luxuriance. If on Pear stocks and not root-pruned, the same sort of trees will require 8ft to 10ft distance between them. Standards for orchards must have the usual distance of 20ft. Fan and horizontal trained for walls on Pear stocks 15ft apart; on Quince stocks 8ft to 12ft apart. Cordons for walls and fences should be 18in apart. A deep, well-drained loam, lying on chalk, suits Pears well. The preparation of the land previous to planting should be thorough in regard to digging and trenching; but no manure should be added to the soil that is rich enough for good growth. The same care ought to be observed in the details of planting as with Apples.

PLUMS.—Plums are grown as standards in gardens and orchards, also as dwarf bushes and pyramids, fan trained, horizontal trained, and as cordons for walls and fences. The dwarf trees are worked on the common Plum stock, standards and pyramids on the Mussle Plum. Plums should be grown in open, sunny positions, whether in gardens, orchards, or on walls or fences. A deep soil is not required, but it should be a moderately moist, sandy loam, and will be improved if intermixed with old mortar. The distances for planting standards should be 15ft to 20ft apart each way, pyramids 9ft to 10ft, fan trained 15ft, bush trained 6ft, to 9ft, cordons to 18in. Plums are usually well furnished with fibrous roots, and on this account they should be kept well covered from the time of lifting until the planting is accomplished, or the tender fibres may be destroyed. Do not plant too deeply, not more than will suffice to cover the roots a few inches. Stake promptly all the standard trees immediately after planting.

CHERRIES.—As standards in orchards, and as bushes, pyramids, and trained for espaliers, Cherries are usually worked on Cherry stocks, but some varieties, including the Kentish and Morello, do well on the Mahaleb stock, which is a dwarfing stock for Cherries. In orchards, standards and half-standards the best adapted, planting them 20ft to 25ft apart. Pyramids in gardens may be 15ft apart, bushes 5ft to 8ft, horizontal, or fan trained, 15ft, and cordons 18in. A rich, sandy soil is best for Cherries, and the trees generally should have an open, sunny position. The Morello will do well on north and east walls.

The restricted trees on walls should be grown with a limited number of branches, and the side shoots shortened to form spurs, but the Morellos will be most prolific if old and weak shoots only are removed, and young growths kept from crowding.—EAST KENT.

Fruit Forcing.

VINES: EARLIEST FORCED IN POTS.—Vines started now will afford Grapes fit for table in April, or a little earlier with sharp forcing. For early work not any are better than Black Hamburgh and Foster's Seedling, or for quality, White Frontignan and Madresfield Court. Stout, well-ripened canes, with plump buds, and given a short rest, answer for early forcing. The Vines require a light, airy, efficiently heated structure, which may be a lean-to facing south, or a three-quarter span-roof having the same aspect, or a span-roof with ends east and west. If the hot-water pipes are at the front of the lean-to or three-quarter, also at the sides of the span-roof, the Vines may be stood upon them, placing tiles or slates on the pipes, and standing the pots on them. The tiles or slates become warmed and transmit the heat to the pots, which are more or less warmed at their base, and the roots are not prejudiced by the heat. The tiles or slates also throw off much of the water or liquid manure escaping from the pots, so that there is no risk of a surfeit of steam.

Pedestals of loose bricks should be formed for Vines in beds to stand upon, thus raising them to the required height and preventing sucking. Vines in pots, and restricted thereto, afford excellent fruit with judicious feeding. Oak or Beech leaves are the best for affording bottom heat, they supply a genial warmth and regular moisture in the early stages, and rich, stimulating food when the demands of the Vines are greatest. The house should now be ready, and the plants placed in position. The canes should be kept horizontally, or have the ends depressed, if necessary, to insure their breaking evenly from the base upwards. Damp the Vines and house two or three times a day, and maintain a temperature of 55deg, on fine days 65deg, the heat about the pots not exceeding 60deg to 65deg. Only afford water to render the soil evenly moist, as a wet medium retards root action, and in no wise contributes to a good break, but the reverse.

EARLY FORCED PLANTED-OUT VINES.—When young and vigorous Vines have to be started for the first time, to afford ripe Grapes at the end of April or early in May, the house should be closed by the middle of the month, for they do not, as a rule, break so quickly as Vines that have been forced for a number of years. The older Vines that have previously been forced need not be started until the beginning of December. To produce a soft humid atmosphere, and to economise fuel, a good ridge of fermenting material may be placed upon the floor or border, and be turned at short intervals, additions of fresh being made as the heat declines. The temperature of the house should range about 50deg at night, 55deg by day, and 65deg on bright days. The outside border must be protected from frost by a covering of leaves, with a little litter over them to prevent their blowing about. If spare lights are at command by all means use them to throw off heavy rains and snow.

HOUSES CLEARED OF GRAPES.—When the Vines are leafless, and the Grapes cut, attend to the pruning without delay, for nothing contributes more to health and a good break than thorough cleanliness, and an early and complete period of rest. Vines in good condition, having stout, short-jointed wood thoroughly ripened, may safely be pruned to a couple of buds. The latter, however, are not always sufficiently developed at the base of the annual growths to give as large bunches as desired, and in that case the laterals may be left a little longer, say, near two more eyes. It is necessary that a plump, round (not large and flat), well-developed bud on stout, hard, thoroughly ripe wood be selected for pruning to, as such usually produces a close, well-set, compact bunch. When the wood has not those characteristics the basal buds are often small, which arises from various causes—sometimes from overcropping, frequently from excessive vigour, at others through overcrowding, and oftentimes from weakness. The result is small bunches when hard and fast lines are practised. Wash the Vines with tepid soapy water, such as paraffin softsoap, 4oz to a gallon of water, using a brush, yet with care and judgment, so as to reach and dislodge any hibernating pests. Remove the remains of the mulchings, also the surface material, down to the roots, especially near the collar, and supply a top-dressing of turfy loam chopped up moderately small, and to a barrow-load (about three bushels) add a pint of steamed bonemeal, a quart of soot, and half a gallon of wood ashes, incorporating thoroughly. Where the houses must be used for plants they should be kept cool, not exceeding 40deg to 45deg, ventilating freely above that temperature.

HOUSES OF THIN-SKINNED GRAPES.—The soil and atmosphere having been saturated by rain, these have caused Grapes that have been ripe since August, particularly Black Hamburghs, to damp considerably in spite of free ventilation and a genial warmth in the hot-water pipes. The Vines that ripened their crops in September are still in foliage, and must bear more

moisture at the roots and in the atmosphere; indeed, moderate moisture in the atmosphere is necessary to prevent undue evaporation and the shrinking of the Grapes. A slight warmth in the hot-water pipes will be required almost constantly to maintain an equable temperature, but this must not be too high, or it will dry the atmosphere and cause the Grapes to shrivel prematurely. A temperature of 40deg to 45deg at night, and 50deg by day, will be sufficient, ventilating freely and early in bright weather, so as to prevent moisture being deposited on the berries. Outside borders should be covered with lights or tarpaulin to throw off heavy rains. Remove all fallen or matured leaves, practising every precaution against damp and mould.

LATE GRAPES.—These do not always finish well, and this usually arises from three primary causes, namely, starting the Vines too late, and not accelerating thorough growth during the spring and early summer months, so as to give the Grapes the full benefit of the summer sun to swell and ripen. Overcropping, too, not only prejudices the current crop, but militates considerably against the succeeding year's bearing of the Vines. A bad condition of the roots is, however, the most disastrous cause of all, for improper food is attended with many evils, and these hinder the perfection of the crop. If the defect is due to overcropping, some relief may be afforded by cutting a portion of the crop at the earliest convenience, and though nothing will be gained by pushing the fire now, the temperature maintained at 60deg to 65deg, with 10deg to 15deg advance from sun heat, so as to secure the thorough ripening of the wood, admitting air freely when the weather is favourable, and leaving a little on constantly. Where the cause can be traced to imperfect drainage or bad borders no time should be lost after the wood becomes sufficiently ripened, or when the leaves give indications of falling, in getting out the old soil, rectifying the drainage, and relaying the roots in fresh compost.

Where the Vines are in proper condition the timely attention to fallen leaves, in clearing away and looking over the bunches for decayed berries, will keep matters straight. Air is the best preventive of mouldiness. A temperature of 45deg to 50deg suits the vinous Grapes, such as Gros Colman, and 50deg to 55deg the Muscats, as both improve considerably after apparently ripe.—**ST. ALBANS.**



* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.

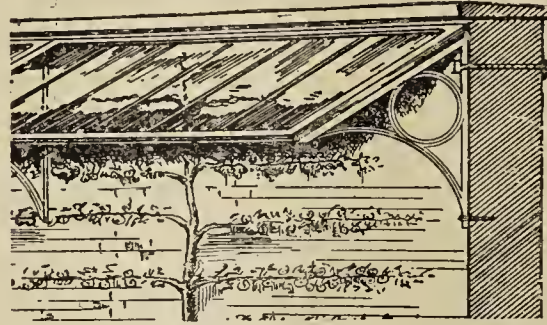
STREPTOCARPUS SEEDLING, TREATMENT (F. G.).—The plants now flowering should be kept moderately moist until the flowering is mainly over, and in an intermediate house or cool stove; when the flowering is over they should be kept somewhat drier; indeed, be gradually ripened off by diminishing the supplies of water, and when the foliage has mainly decayed water may be entirely withheld. The plants can then be stood on a damp base with no danger of drip falling on them, and the roots will then keep sound until the spring, when they should be shaken out, repotted, and started in gentle heat.

BANKSIAN ROSES NOT FLOWERING (Idem).—The most common cause of this is non-maturity of the wood, often aggravated by keeping or allowing too much growth, so that the shoots have not full exposure to light and air, and in consequence are soft and unripe. Another cause is severe or close pruning, whereby a number of soft growths are made, and the consequent crowding results in weakly and immature shoots. This Rose requires very little pruning, merely cutting out the old growth in favour of young, and training the shoots rather thinly, so as to secure thoroughly solidified growth and well-ripened wood. Then it blooms freely under favourable conditions, as against a south wall, only the immature points of the long shoots being shortened to sound, well-ripened wood.

DRESSING FOR CUTTING BOXES (X. Y. Z.).—The usual dressing for Hop poles is creosote. This is an excellent preservative of wood in or out of the ground, but it is not suitable for the purpose you require, nor for dressing the woodwork of plant or fruit houses. A safe and excellent dressing for woodwork used for horticultural purposes is Stockholm tar, thinned to the consistency of paint with paraffin oil. The woodwork, boxes, stages, &c., should be thoroughly dry, and the dressing

applied with an ordinary paint brush, apply as a priming coat to both inside and outside of the boxes. Three coats may be given to the outside, allowing the first coat to become dry before applying the second, and so on between the second and third. The woodwork so treated has a brown colour, and when dry may be painted any colour required if so desired, as for stages, &c., though for boxes this may not be considered necessary.

PORTABLE PEACH-TREE WALL COPING.—If tender Peaches and refined Pears cannot be sheltered by means of a full glass-case (the Peach-case as usually spoken of) the next best thing as a means of protection is the wall coping. These copings are useful in this, that they prevent a certain amount of vertical



heat radiation, which if uninterrupted, results in such cooling of the exposed surfaces of growth, that harm ensues. Frost is said to be due to loss of heat by radiation. If a glass coping can prevent a certain amount of radiation, say to the extent that would register two or three degrees of

frost, then it serves a very useful purpose. When trees are in blossom we do not expect many hard frosts, though sudden "snaps" are not uncommon; and these often destroy a season's promise of fruit. A little extra outlay then, in providing copings or cases, is desirable. Our illustration here is from Mr. Duncan Tucker, the horticultural builder, of Tottenham, N. In these portable copings the glass is removable, and can be stored away all summer and winter, being mainly of use in the spring.

DRAINING A FIELD (S. S. W.).—The first point to be determined is the outlet. This should always be at the lowest point of the land, or such as will afford a sufficient fall for the water; the outlet pipe should not be at the immediate bottom of a ditch, but above the water ordinarily running in it. The main drain, or drains, must be at the lowest part in the line of the greatest slope, and all the minor drains must enter the mains diagonally in the same direction as the run of the water, and not at right angles. A 4-inch main drain is usually sufficient to carry off the water from five or seven acres; but where the land is springy larger mains or more of them are required. The drains should not be less than 3ft deep, and where there is sufficient fall they are better 3½ft to 4ft deep. A smooth and even fall and certain outlet must be provided. A sharp fall is not necessary. The distance of the drains will be determined by the nature of the soil. Sandy, gravelly, or silty subsoils draw well, and the drains should be 24ft apart; for medium textured subsoils, 21ft; for stiff loams, 18ft; and for retentive clay subsoils, 15ft apart. In tenacious soils it is a good plan to fill the trench with stones up to the level of the disturbed soil, or, say, 2ft from the surface; but in soils that are springy, as happens in sand, a little straw on which to lay the pipes is necessary, covering them lightly with the softer portions of hedge brushings, to prevent their being choked with quicksand. All outlets must be secured with iron grating sufficiently small between the bars to exclude animals of the size of rats, or less. This work of draining must be done carefully and thoroughly, it being essential that the trench be examined before the pipes are laid, in order that any faults may be discovered and rectified.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (J. F. N.).—1. *Abies pindrow*; 2. *Cedrus Libani*, probably; 3. *Fitzroya patagonica*; 4. *Cupressus eashmeriana pendula*. (F. L.).—1. *Dædalacanthus nervosus*; 2. *Erica hyemalis*; 3. *E. gracilis*; 4. *Jasminum graecillimum*. (S. J. B.).—1. *Tillandsia zebrina*; 2. *Æchmea fulgens*; 3. *Asparagus verticillatus*. (N. A.).—1. *Polygonum molle*; 2. *P. polystachyon*.

PUBLICATIONS RECEIVED.—"Bulletin of Miscellaneous Information": New Garden Plants of the year 1902. Royal Gardens, Kew, price 4d. * * * Annual Report of Proceedings under the various Agricultural Department Acts, for the year 1902, price 6d. * * * "The Tropical Agriculturist," September 1. The articles include: The Latest in Fibres, History of the Introduction of Para Rubber into the Malay Peninsula, Mango, its Culture and Varieties, The Invention of a new Artificial Fertiliser, The Supposed new Substitute for Rubber, &c. * * "Bibby's Quarterly," autumn number, 1903. The price of this most beautifully illustrated quarterly is 9d., post free, from J. Bibby and Sons, Formby Street, Liverpool. There are twenty-two coloured illustrations throughout the issue, many of them portraying agricultural subjects. Purchasers will find plenty to interest them in "Bibby's Quarterly," dealing as it does with the country, and also home life. * * "The Indian Agriculturist," October, 1903. Agriculture. Mineralogy. Statistics. * * Agricultural Returns, 1903 (Acreage and Live Stock), price 6d.

Covent Garden Market.—November 11th.

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, green, doz.	2 6	to 0 0	Horseradish, bunch ...	1 9	to 2 0
„ Jerusalem, sieve	1 6	0 0	Leeks, bunch ...	0 2	0 2½
Batavia, doz. ...	2 0	0 0	Lettuce, Cabbage, doz.	0 6	0 0
Beet, red, doz. ...	0 6	0 0	Mushrooms, per lb. ...	1 0	1 3
Brussels Sprouts, ½-sieve	2 0	2 6	Onions, Spanish, case	5 0	0 0
Cabbages, Spring, tally	2 0	0 0	Mustard & Cress, doz.		
Carrots, bunch ...	0 2	0 0	„ punnets ...	1 6	0 0
Cauliflowers, doz. ...	1 6	2 0	Parsley, doz. bnchs. ...	2 0	0 0
Celery, per bun. of 8 ...	0 9	1 0	Potatoes, cwt. ...	4 0	6 0
Corn Salad, strike ...	1 0	1 3	Radishes, doz. ...	0 9	1 0
Cucumbers doz. ...	4 0	5 0	Spinach, bush. ...	2 0	0 0
Endive, doz. ...	1 6	0 0	Tomatoes, English, lb.	0 6	0 0
Herbs, bunch ...	0 2	0 0	Turnips, bnch. ...	0 2	0 0

Average Wholesale Prices.—Plants in Pots

Most of the undermentioned plants are sold in 48 and 32-sized pots

	s. d.	s. d.		s. d.	s. d.
Adiantum eucatum,			Eulalia japonica ...	12 0	to 15 0
48's, per doz.	6 0	to 7 0	Ferns, var., doz. ...	4 0	18 0
32's, „	12 0	15 0	„ small, 100 ...	10 0	16 0
Aralias, doz. (48's) ...	6 0	8 0	Ficus elastica, doz. ...	10 0	15 0
Araucaria, doz. ...	21 0	24 0	Foliage plants, var, each	1 0	5 0
Aspidistra, doz. ...	24 0	36 0	Grevilleas, 48's, doz. ...	5 0	0 0
Asparagus, 48's ...	10 0	12 0	Lycopodiums, doz. ...	3 0	0 0
Bouvardias, „ ...	6 0	8 0	Marguerite Daisy, doz.	8 0	9 0
Chrysanthemums, lifted	6 0	9 0	Myrtles, doz. ...	6 0	9 6
„ disbudded specimens	1 0	2 6	Palms, in var., doz. ...	15 0	30 0
Crotons, doz. ...	18 0	30 0	„ specimens ...	21 0	63 0
Cyperus alternifolius			Pandanus Veitchi, 48's,		
doz. ...	4 0	5 0	doz. ...	36 0	48 0
Dracæna, var., doz. ...	18 0	21 0	Shrubs, in pots ...	4 0	6 0
„ viridis, doz. ...	8 0	12 0	Solanums ...	12 0	10 0

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, Canadian Bald-			Lemons, case ...	10 0	to 15 0
wins, per brl.	18 0	to 20 0	„ Malaga, per case	19 0	21 0
„ Greenings, „	20 0	24 0	„ Naples, 420's, „	27 0	30 0
„ Nova Scotia			Nuts, Cob, per lb. ...	0 8	0 0
Gravensteins			„ Walnuts, per bag	6 6	7 0
per brl. ...	18 0	20 0	Oranges, case ...	12 0	15 0
„ Ribbons, brl. ...	24 0	27 0	Grapes, Alicante, lb. ...	0 10	1 3
Bananas—			„ Colman ...	0 10	1 6
Canary, finest X large,			„ Hamburgh ...	1 0	1 6
per bun.	13 0	14 0	Pears, Comice, ½-case	12 0	13 0
„ No. 1's ex. „	10 6	11 0	„ Winter Seckle „	12 0	0 0
„ Ordinary „	0 0	9 0	„ Calabash „	12 0	0 0
Cranberries ... per case	10 6	12 0	Pines, St. Michael's	3 0	4 0
Figs, Italian, 12's, 15's,			Pomegranates, Valencia		
per doz.	1 6	1 9	200's	8 0	0 0
„ „ 24's „	2 6	3 0			

Average Wholesale Prices.—Cut Flowers.

	s. d.	s. d.		s. d.	s. d.
Arums, per doz. ...	2 6	to 3 0	Lilium Harris, per		
Bouvardia, pink, white,			doz. blooms ...	2 0	to 3 0
and red, per bun. ...	5 0	6 0	„ lancifolium al-		
Carnations, pink Joliffe,			bun, per doz. blms.	1 6	2 0
per doz. bun.	15 0	18 0	Lilium lancifolium ru-		
„ pink, Franco, „	15 0	18 0	brum, doz. blooms	2 6	3 0
„ red, Winter Cheer,			Lily of Valley, special,		
per doz. bun.	15 0	18 0	per doz. bunches ...	15 0	18 0
„ white, Deutsche			„ Best, doz. bun. ...	10 0	12 0
Braun, doz. bun.	12 0	15 0	„ Ordinary, dz. bun.	8 0	9 0
„ Duchess of Fife „	15 0	18 0	Orchids, Cattleyas, doz.	10 0	0 0
„ Uriah Pike, crim-			„ Cattleyas, Harri-		
son, doz. bun.	12 0	15 0	soni, per doz.	5 0	6 0
Carnations, American			„ Cypripediums „	2 6	3 0
varieties, cut long—			„ Odontoglossums „	4 0	5 0
Mrs. T. Lawson, bright			Pelargonium, white,		
pink, per doz. ...	2 6	3 0	per doz. bun. ...	4 0	5 0
Royalty, deep pink, „	12 6	3 0	Roses, Bridesmaid, doz.	2 6	3 0
Cream of Pinks, sil-			„ Marechal Niel, „	0 0	0 0
very pink, doz. ...	2 6	3 0	„ Mermetts, doz. ...	2 0	3 0
Dazzler, scarlet, doz.	2 6	3 0	„ Niphetos, doz. ...	1 6	2 0
Cape Gooseberries, per			„ „ ex. fine, doz.	0 0	2 6
doz. bun. ...	6 0	8 0	„ Perle des Jardins,		
Chrysanthemums—			per doz. ...	1 6	2 6
White, yellow, pink,			„ Sunrise, per doz. ...	2 0	2 6
bronze, doz. blooms	1 0	2 0	„ Sunsets, per doz. ...	1 6	2 0
White, yellow, pink,			„ Safrano, English,		
bronze, specimen			per doz. ...	0 0	0 0
blooms, per doz. ...	2 6	4 0	Stephanotis, 72 pips ...	2 6	3 0
White, yellow, pink,			Tuberose, per doz. ...	0 0	0 4
bronze, specimen			Violets, English, single		
blooms, bunches ...	3 0	6 0	per doz. bun. ...	1 0	1 6
Geranium, double scar-			„ English, double,		
let, per doz. bnchs.	4 0	5 0	per doz. bun. ...	3 0	4 0
„ White „ „	4 0	5 0			

Average Wholesale Prices.—Ferns, Foliage, Moss.

	s. d.	s. d.		s. d.	s. d.
Asparagus, long, bnch.	2 0	to 2 6	Ivy leaves, doz. bun. ...	1 6	to 0 0
„ medium, bunch ...	1 3	1 6	Myrtle, large French,		
„ short, per doz. bun.	6 0	7 0	per doz. bun. ...	1 0	0 0
„ Sprenger, dz. bun.	9 0	18 0	„ small English, per		
Smilax, long, doz. trails	3 0	0 0	doz. bun. ...	6 0	0 0
Maidenhair, best, per			Moss, natural green, per		
doz. bnchs. ...	0 0	6 0	gross bun. ...	6 0	0 0
Berberis, per doz. bun.	0 0	0 0	„ Lichen, full size		
Croton foliage, various,			boxes, per box ...	1 0	0 0
per doz. bun. ...	9 0	12 0			



The Water-logged Land.

In too many cases at the present time, the damage, or maybe ruin, of this year's crops are not the only sources of anxiety to the farmer. He is equally concerned as to the prospect for next season. This anxiety is also shared by a majority of those who saved their crops before disaster occurred, so that on every hand we see anxious faces.

The difficulty of sowing Wheat is but a minor one, for on all the lighter soils the seedbed will be sticky enough to ensure solidity, whilst not being an impossible one as is the case on clay or on low lying lands, at any rate at present. An immense amount of land is so sodden that only a continued spell of sharp frost can put it into a cultivable condition, and therefore the sowing of autumn Wheat on a large area of the best Wheat soil, may be at once dismissed from calculation. A great portion of this land is not very suitable for Barley, but on the contrary; and on much of it spring Wheat could not be sown with much prospect of success. Therefore, Oats or spring Beans are the only possible crops, and we think the former holds out the best prospects of success, as it can be grown without yard-manure which, some time or other before seed time, would mean carting it on the land. What we want now is the easiest method of lightening up the soil with the minimum amount of treading, and then a period of forgetfulness, leaving Nature to do her share of the work. The steam drag, which avoids the injurious effect of the horses' feet on the spongy soil, is an invaluable implement just now, and should be used whenever possible. By its means many Potato fields may be sown with Wheat, even under present conditions. It is far superior to the plough in bringing to the surface Potatoes which have been missed, and if the seed Wheat be broadcast by a capable man immediately after the drag has passed, one harrowing with horses will suffice to complete the job. There is, however, such a thing as harrowing by steam, and when the engines can be retained, the superiority of the work would justify the additional expense.

For preparing land to obtain the greatest benefit from the action of winter frosts, nothing worked by horse power can equal the digging plough. Spring-tooth cultivators may be used to stir the soil; they entail less treading and the work is both economical and quickly performed, but if we wished to make a good job of sodden land, we should use the digger, but not in the ordinary way. We should make our furrows as wide as possible and not very deep, using the plough as if we were ridging, and leaving the land in a state somewhat like ridge and furrow. If such a method were found impracticable, then we would use a double-breasted ridging plough and leave the land in ridges until February or March. This method is most successful in the preparation of land for Potato planting, and it sounds reasonable that it should be equally effective in the case of spring corn.

With the whole country in such an abnormal state it may be necessary in ploughing in the ordinary way, to make the lands much narrower than they have previously been, viz., 9yds or 12yds lands instead of 24yds or 36yds. Furrows greatly assist surface drainage, and therefore can hardly be too numerous under present circumstances; but

they will be of little use unless each has an outfall, therefore the land should be ploughed in the way that will the most assist to attain that object. If preferred, and extra expense is not objected to after the ploughing is completed, two or three deep grips may be cut across the ridges to carry the water from the furrows to the main drains. Under the most favourable conditions the land will be a long time in getting rid of the superfluous water, and farmers, instead of wringing their hands and jibbing at the "Clerk of the Weather," will be better employed in giving Nature all the assistance in their power.

Bad Times in the Villages.

The proprietors of the village stores are complaining bitterly of the badness of the rural trade. They say there is no money circulating; that cash is becoming scarcer every day, and credit longer. Can it be wondered at? There is little extra pay to be earned now at harvest time. A "small" farmer told us the other day that when he was a labourer thirty years ago, he thought he did badly if he and his wife, aided by one or two children, did not earn £18 over the corn harvest. Now there is little or no mowing, no binding, and a bare 5s. per day for leading. Where a labourer used to clear £15, clear, extra money, by harvest work, he now gets 2s. per day extra for a fortnight or so; at most, not much more than 30s. Employment is much more certain than it used to be, and taking one part of a year with the other, is not so badly paid for; but the labourer gets no big pulls now.

The single waggoners have decidedly the best of it with farmers at present. Their wages are good, and the purchasing power of money is high, but very shortly we shall have Martinmas hirings, and perhaps a reaction may take place. Trade is slack in most towns, and a goodly number of single men have lately returned to the villages and are now employed, when the weather will allow, in Potato lifting, threshing, &c. Some of these may require to re-assume the duties of waggoner. The farmer, short of money, and with little to sell, must perforce use every method of retrenchment, and will not hire two men to feed and pay where he can make one fulfil his purpose. Seeing plenty of spare hands about he will prefer to employ them only when urgently needed. Neither the yearly men nor the catch-penny hands are likely to earn so much as they have been used to do, and there can be no improvement in village trade until there has been another harvest. Village prosperity is ruled first by the spending power of the inhabitants, and that in turn hinges on the wage-paying ability of the farmer. We have many times, and very recently, heard both labourers and tradesmen fairly gloat over the misfortunes of farmers. Is a period of acute distress to be the means of correcting the spirit which produces such stupid ill will?

Work on the Home Farm.

During the past week we have only had one wet day, and more useful work has been got through than in any one week since early September.

We are just finishing the Potatoes, though there are plenty of farmers who have a week or two of work amongst them yet. As far as can be judged, the disease has not spread very much lately amongst those still in the ground, but in many pies it has made great progress, and one grower is very anxious to get his stores turned over, being very much afraid of their collapsing. As we wrote a month ago, it is madness to put disease-smitten Potatoes in big heaps. We have made ours but 6ft wide at the base; it is rather extravagant of straw, but that is plentiful enough.

There is quite a crop of draggings and harrowings to pick up after the rows have been lifted with every care, and we fear many tubers are still left in the land. Some will be found after the plough, but not all.

Careless stacking and dilatoriness in thatching are being held responsible for much loss. Threshing machine men report numerous cases of six, eight, or ten quarters of wet, unsaleable, ungrindable, and almost useless grain from the roof of a stack which had been led in fair condition and of which the lower and dry portion yielded excellent and valuable grain. It is the want of the one nail again which loses so much.

Corn of this kind, which cannot be ground and will not keep, may be given to sheep instead of cake. It also may be given sparingly to horses to eke out other corn, and to pigs which are not too far advanced in fat condition. It is useful in moderate quantity to both suckers and those which have been recently weaned.

Having an abundance of offal Potatoes, we are steaming them freely and giving our feeding pigs very little meal. Potatoes only just touched with disease make capital pig food, either cooked or raw. Pigs which will eat raw Potatoes and do well on them are valuable just now.

Working horses will, of course, be now living entirely on dry food, and should be given a little linseed cake in their water during the winter. Crushed linseed boiled is comparatively cheaper, but the boiling is rather troublesome, and has ruined many a small pair in the process. Yearling horses and weaned foals must have both corn and a little hay, for grass alone is not good enough for them.

Canada Calls for Britons.

Writing from Winnipeg, Manitoba, Mr. Edgar Wallace, of the London "Daily Mail," says: "The land owned by the Yankee farmer in the States is worth to him, say, anything up to 150 dollars an acre. From this he derives something like five per cent., that is, let us say, 7.50 dollars per acre a year. He knows now that in Canada there are thousands of acres to be had for a third to a half the cost of his own land, that will yield the same crops as his more expensive property; land that, costing him fifty to seventy-five dollars an acre, will return 7.50 dollars per annum. The Yankee does the natural thing. He sells his property, moves over into Canada, and for the money he has received for the sale of 500 acres of American farm-land he buys 1,000 acres of Canadian, as good, if not better, as the soil he has sold.

"There must be in England a large number of investors seeking new and profitable employment for their money, and to these I would point out the thousand and one opportunities for investment. I hesitate to urge any particular form that investment should take; I am satisfied that any transaction in real estate must be profitable, and I am convinced that the influx of British capital into Canada would have a most stimulating effect upon an already prosperous Colony, and would eventually result for the good of the Empire. I am no financier, and do not know how far the change would be possible; but it does seem that if the Imperial conscience could only be awakened, and if the Imperial Briton asked himself once a day, 'How can I help the Colonies?' as religiously as a penitent searches his soul for sin, not only would patriotism become beautiful, but, better still, it would be profitable, for thereby much money now invested in foreign securities and industries would be diverted to the more proper channel of Colonial investment. For Canada, like any other agricultural country, wants money; but unlike most countries similarly situated, she has such excellent securities in her undeveloped resources, and her solvency is so firmly assured by Nature herself, that the fulfilment of her requirements is not so much a question of time as it is a question of source.

"And then, as to men. Surely there are plenty of men in the British Isles who have the health, the strength, and the inclination to work with their hands, and hardy enough to rough it in the most glorious climate in the world? Men with sufficient of the old adventurous strain left to leave the beaten track of home life and hew out a path for themselves and posterity in the virgin depths of this new land? Or must Canada be left to the Galician, the Russian, the Swede, and the Yankee? One would imagine that in this, the most promising of the British Colonies, the British emigrant would be preponderant. Take the figures for last year:

Immigrants from United States..	26,388
Immigrants from Great Britain..	17,259
Galicians, Germans and Scandinavians ..	10,049
French, Hungarians and Austrians ..	2,022
Russians and Finlanders ..	3,759
Other nationalities ..	7,902

Thus, out of a total of 67,379 Great Britain furnishes less than a quarter. Canada wants men—the right sort of men. That she can draw twice as many from the United States as she can from England and Wales (the figures are 13,095 to 26,328), knowing, as we know, how greatly is the supply of labour in excess of the demand, is a standing reflection upon the manhood of the Mother Country."

Trade Catalogues Received.

HORTICULTURAL BUILDERS.

R. Halliday and Co., Middleton, Manchester.
Henry Hope and Sons, Ltd., 55, Lionel Street, Birmingham.
Messenger and Co., Ltd., Loughborough.
G. W. Riley, Herne Hill, London, S.E.
John Webster, Wavertree, Liverpool.

PLANTING SEASON



PAULS' ROYAL NURSERIES

WALTHAM CROSS, HERTS.

12 miles from London. South Entrance four minutes' walk from Waltham Cross Station; West Entrance three minutes' walk from Theobald's Grove; both Stations on the Great Eastern Railway.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Gold Medals in 1903 from Royal Horticultural and Royal Botanic Societies.

FRUIT TREES for the Orchard, Garden, and Forcing House. Hogg Memorial Medal, 1901.

HARDY TREES for Streets, Parks, and General Planting. Silver Medal from Royal Agricultural Society of England.

SHRUBS, both Evergreen and Deciduous.

CLIMBING PLANTS, Hardy and Greenhouse.

RHODODENDRONS, CAMELLIAS, & AZALEAS.

HERBACEOUS PLANTS in great variety.

BULBS and SEEDS, and all Garden Sundries.

PRICE LISTS ON APPLICATION. INSPECTION INVITED.
Upwards of 1000 Medals, Prizes, and other Awards at leading Exhibitions during the past 42 years.

SOLE POSTAL ADDRESS—

WM. PAUL & SON,

WALTHAM CROSS, HERTS.

Rose Growers by Appointment to His Majesty the King.

GRAPE VINES in POTS

Extra Strong Fruiting and Planting Canes
in all Leading Varieties.

FIGS IN POTS

All Leading Sorts.

Bushes and Fan-trained for Walls.

DICKSONS Nurseries CHESTER

RIVERS'

FRUIT TREES,

ROSES, VINES,

FIGS, ORANGES,

AND

Orchard-House Trees.

A LARGE AND SELECT STOCK
ALWAYS ON VIEW.

ILLUSTRATED & DESCRIPTIVE CATALOGUE,
Post Free, 3d.

THOMAS RIVERS & SON,

SAWBRIDGEWORTH, HERTS.

HARLOW STATION, G.E.R.

CLIBRANS

Forest Trees

THE attention of large planters is invited
to the undernoted items, taken from
our TREE and SHRUB LIST:—

ALDER (*Alnus*), COMMON.

	Per 100.	Per 1000
1 year seedlings	—	3/6 & 5/-
1½ to 2ft. transplanted ..	3/-	20/-
2 to 3ft.	3/6	27/6
3 to 4ft.	4/6	40/-

ASH (*Fraxinus*), COMMON.

1 year seedlings	—	5/-
1 to 1½ft. transplanted ..	—	17/6
1½ to 2ft.	—	21/-
2 to 3ft.	4/-	30/-
3 to 4ft.	5/-	40/-
4 to 5ft.	6/-	50/-

BEECH (*Fagus*), COMMON.

1 year seedlings	—	5/-
1 to 1½ft. transplanted ..	3/-	20/-
1½ to 2ft.	4/-	30/-
2 to 3ft.	5/-	40/-
3 to 4ft.	7/6	50/-

BIRCH (*Betula*), COMMON.

1 year seedlings	—	5/-
1 to 1½ft. transplanted ..	3/-	20/-
1½ to 2ft.	3/6	25/-
2 to 3ft.	4/-	30/-
3 to 4ft.	6/-	50/-

BIRCH (*Betula*), WEeping OR SILVER.

1 year seedlings	—	7/6
1 to 1½ft. transplanted ..	3/6	25/-
1½ to 2ft.	4/-	30/-
2 to 3ft.	5/-	40/-
3 to 4ft.	7/6	50/-

CHESTNUT (*Aesculus*), HORSE.

1 year seedlings	—	12/6
1 to 1½ft. transplanted ..	4/-	30/-
1½ to 2ft.	5/-	35/-
2 to 3ft.	6/-	45/-
3 to 4ft.	10/6	80/-
4 to 5ft.	15/-	—

FIR, AUSTRIAN PINE (*Pinus austriaca*).

1 year seedlings	—	3/6
2 year	5/- to 7/6	—
6 to 9in., twice transplanted ..	3/-	25/-
9 to 12in.	4/-	30/-
1 to 1½ft.	5/-	40/-
1½ to 2ft.	10/-	90/-
2 to 2½ft., extra	50/-	—

FIR, DOUGLAS (*Abies Douglasii*).

1 year seedlings	—	20/-
9 to 12in., twice transplanted ..	15/-	140/-
12 to 18in.	25/-	220/-
1½ to 2ft.	40/-	350/-
2 to 3ft., thrice	60/-	—

FIR, LARCH (*Larix*). (True Native).

1 year seedlings	—	5/-
Per 100,000, £20.		
2 year seedlings	—	15/-
6 to 12in. transplanted ..	3/-	21/-
1 to 1½ft.	4/-	25/- to 30/-
1½ to 2ft., twice transplanted ..	5/-	35/- to 40/-
2 to 3ft.	6/-	45/- to 50/-

FIR, SCOTCH (Native Highland Bonnet).

1 year seedlings	—	5/-
2 year seedlings	—	10/6
15 to 24in., transplanted ..	7/6	60/-

OUR COMPLETE

TREE & SHRUB LIST

GRATIS AND POST FREE.

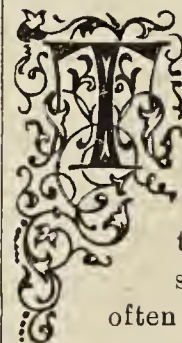
ALTRINCHAM & MANCHESTER



Journal of Horticulture.

THURSDAY, NOVEMBER 19, 1903.

Types of Fruit Trees.



THE planting season extends all winter, so long as the weather is mild and open. Planters should consider carefully the merits of various classes of trees before they make their final selection. By doing this they may often avoid mistakes which have to many, proved costly in the past. A point frequently forced to the front in various quarters is, that if trees are obtained from a colder district than that in which they are to be planted, they will give better results than when brought from a warm to a slightly colder district. I have never been able to find that this assertion has any foundation in fact, and after having watched the behaviour of trees obtained from various sources closely for some years, I am decidedly of opinion that this old idea is an absolute fallacy. The vital point is to get well grown trees with plenty of fibrous roots, and top growths free from insects or diseases, and correctly named; then, no matter from what district they are obtained, if planted under suitable conditions, good results will inevitably follow.

Another fallacy which needs combating is the idea that the planting of big trees necessarily means quick returns in the shape of fruit. There is at the present time a great demand, among persons not well versed in fruit culture, for trees with long, strong shoots, which have been quickly grown. Nurserymen must, of course, cater for this class of customers, and they do so by transplanting the trees intended for them less often than those which are disposed of to men who know what good trees should be like. The big, quickly grown, untransplanted trees have but few fibrous roots, and when they are set out in their permanent positions they necessarily take a long time to get thoroughly established. The

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

ideal tree is one which has plenty of fibrous roots and a moderately large head, with short-jointed, well-ripened wood. A tree with a small head and plenty of good roots is greatly to be preferred to one having a big top and a few long, strong roots.

If the right type of tree was more generally planted, there would be fewer discussions as to whether it is better to cut the shoots hard back the first year after planting, or allow them to go unshortened for a year. The badly rooted tree cannot make much progress the first year, whether it is cut back or not. For planting in private gardens, where the soil is rich, trees three or four years old have their advantages—always provided they have been shortened annually to get sturdy branches, and have also been transplanted the previous year. Such trees, under good management, begin to bear quickly, and in dry seasons means can generally be found to water them at critical times. For planting on a large scale for market purposes, a different type of tree is, however, necessary, as the soil is usually less rich, and the close attention given in private gardens cannot be practised. Trees two or three years old are therefore the favourites with the market men, because they become quickly established, and can be formed by pruning into the desired shape.

Standards are, of course, the best types for planting on grass, and large quantities are needed annually for that purpose, but it is somewhat surprising that this form of tree is still very often largely planted on cultivated land. Presumably the reason is that standards leave a greater space for small fruits between than bushes do; but the bush form for Apple trees has so many advantages that I believe the time will come (and the sooner the better) when the bulk of these fruits seen on our markets will be grown on bush trees and worked on the Broad-leaved Paradise stock. The more I see of trees on this stock, the better I like them. It seems to be usual to recommend Pears to be grown as pyramids: the reason often advanced is that a tree of that form is so designed as to catch the greatest number of the sun's rays. That point, I believe, no one will dispute, but the weak point about a true pyramidal shaped tree is that, in order to keep it shapely, the strong-growing branches near the top have to be pruned hard, and therefore send out hosts of other strong shoots. And how often do we see beautifully shaped trees which seldom produce fruit near the top because of this hard cutting back; yet it is at the top of a tree that some of the best fruits should be grown. I am strongly in favour of the open bush, both for Apples and Pears. After the central leader has reached a height of from two to three feet, remove it and leave the centre of the tree open. The result is that, as the main branches all spring from the central stem within a couple of feet of each other, they are pretty equal in vigour. A well-balanced head is thus obtained, and the fruit, having full exposure, colours well.

With regard to trained trees for covering walls quickly, the various forms of cordons are making headway, and deservedly so; for by their use several years are gained in covering a moderately high wall. The reason for this is that with a cordon it is never necessary to cut back a leading shoot to originate an additional branch; hence their advantage over other forms of trained trees. While writing of cordons, I am not referring to single cordons only. I have great faith also in the two, three, and six branched cordons. In each case the number of branches required have already been originated when the trees are purchased. The leaders can, therefore, be trained right away to fill their allotted space quickly, the only shortening necessary being, when through any cause, they grow too weakly. There is a fine opportunity on our English markets for growers of good, clean samples of Pears, and by growing cordons on walls and fences a quick return can be secured. This year we must, of course, write against the Pear crop the ugly word "failure," but we shall undoubtedly have good times for Pears again.

In regard to planting of all descriptions—if the rain will only keep off for a time to allow the surface to dry—the soil will soon be in a better condition for such work than it has been for years, because the subsoil, having been thoroughly moistened, will hold in reserve a supply of moisture for the roots to draw upon in times of need. I am, of course, referring to soil which has good natural drainage, or has been drained by artificial means. Water-logged land is outside the province of the fruit grower.—H. D.



Oncidium pumilum.

This very distinctive and interesting, though not particularly attractive Orchid, is not found in many collections. All the same, it is fairly well known, and those who do cultivate it have no difficulty, so far as we know, in getting it to flower. The inflorescence, as may be seen from the illustration, forms a dense scape, and the colour is yellow, the sepals and petals, moreover, being spotted with brown. The leaves are 2in to 4in high, stiff, erect, and without pseudo-bulbs. They are nicely marbled. The plant is a native of Brazil, and requires an intermediate-house temperature.

Cypripedium insigne at Ugbrook Park.

Growing in a cool house in Ugbrook Park Gardens, I recently saw one of the best batches of this Orchid I have come across. It is not that the plants were of huge size, but it was the freedom with which they were flowering in exceptionally small pots that impressed me. Plants furnished with abundant leafage, and carrying from six to eight full-sized blossoms in 3in pots, I thought were deserving of comment. Such material cannot fail to be extremely useful for room decoration.—E. M.

The Week's Cultural Notes.

The genus *Lycaste* has much to recommend it, the plants being extremely free flowering and very handsome. The popular *L. Skinneri* will by now have finished its growth, and the flower buds will soon be appearing about the base of the bulbs. Although less water will now be needed, the roots must not be entirely dried up, or the plants will suffer. The more roots a specimen has, and the better it is established, the easier it is to cater for it, as a mistake either way in watering does little harm. It is the badly-rooted plant that suffers most, because if overwatered the roots are not able to take it up, while drought still further weakens the pseudo-bulbs, that owing to the scarcity of roots are weak to begin with.

Although weaker in growth than the preceding, those charming little species *L. cruenta* and *L. aromatica*, are easily kept in health. The enormous number of flowers produced by even very small plants constitute a great strain upon them, and at no time must the roots be really dry, or the pseudo-bulbs will suffer. Now is the very quietest time in their year's work, but even now they need a little sustenance, *L. lanipes*, *L. Barringtoniae*, and *L. Deppei* all need similar treatment, the last named being the weakest grower.

When *Cattleya Bowringiana* has been grown warm the flowers will by now be getting past, and any plants that are needing attention at the roots must have it without delay, or the young tips will be injured in the process. It is an operation requiring the greatest care to repot plants of this description after they have started rooting, and it must not under any consideration be left to careless or unskilful assistants. Before placing any of the new compost a little damp sphagnum moss must be gently wound about the base of the last-formed bulbs, where the roots are emitted, and while firmly fixing the rest of the compost no pressure must be brought on this. It is worthy of note in passing that not only is this beautiful plant more healthy in a warm house, but the earlier date at which it flowers under these conditions renders it practically safer from the fog. The autumn flowering *C. labiata*, too, may require attention, but here individuals will vary greatly, some commencing to root before the flowers are past, others remaining some time after. Plants of this and others that show no disposition to root should be kept well on the dry side. *C. Dowiana aurea*, for instance, kept moist often refuses to root, but a week or two of dry treatment is conducive of activity.—H. R. R.

Orchids from the "Harefield Hall" Collection.

From the catalogue of the two days' sale (November 4 and 5) of duplicate Orchids, the property of Elijah Ashworth, Esq., Harefield Hall, Wilmslow, Cheshire, we take the following paragraphs:—

ODONTOGLOSSUM "STAR OF HEATON."

A beautiful and distinct *Odonto*, with full flowers, sepals and petals broad, ground colour white, petals and lip blotched with a rich brown colour (of $\frac{3}{8}$ th of an inch area), marked with a number of small spots of a blue tinge round the edges of the sepals, petals also blotched with brown spots ($\frac{1}{8}$ th of an inch). From Messrs. Charlesworth and Co.

DENDROBIUM WILLIAMSIANUM.

A fine plant. Last year's bulb measured 26in, and the two leading bulbs 12 $\frac{1}{2}$ in, well leaved. A distinct and handsome species from New Guinea; it has large flowers with pure white

sepals and petals, and scooped-shaped lip of a deep magenta purple. Only six plants were found originally, and of these only one arrived in a living state, and the plant now offered is said to be the only one left. For further particulars of this rare and beautiful *Dendrobe* see "Orchid Album," Vol. 6, plate 252. Received a F.C.C. at the R.H.S. Bought from the "Selwood" collection, but originally came from Messrs. B. S. Williams and Son.

ODONTOGLOSSUM CRISPUM ASHWORTHIANUM.

This superb *Odontoglossum* is remarkable for its deep rosy-purple colour and its large, almost unbroken blotches on its segments, which extend almost to the edge of its sepals and to within about 1-32nd of an inch from the edge of its petals. The whole flower is so densely coloured that it may be justly described as a self-coloured crispum, the colour running through to the back of the flower. The flower is large, sepals and petals broad, with toothed or crisped margins; the lip is large and well shaped, white, blotched with a lighter colour than its segments. It is in the same section as *O. crispum* Baroness Schröder, and *O. crispum* Franz Masreel. Received an unanimous F.C.C. at the R.H.S., April 18, 1899, where it was exhibited, bearing a fine spike of six flowers, which has been faithfully painted by "Macfarlane." Illustrated in *Lindenia*, Part 64-65, May-June, 1896.

The Art of Decorating.

The following appeared in the "American Florist": It is a very exasperating circumstance when a florist, employed to execute a piece of decorating, is compelled to discard a wealth of beautiful and appropriate material that he may have at hand and could make use of with profit as well as credit, and to ransack the market for something less appropriate, just because the madam has set her mind upon it; but this is an experience that every florist must repeatedly undergo, for crotchety and arbitrary people are found everywhere, and especially among the opulent classes, with whom a florist's services are most in demand. On the other hand, we have occasionally the customer who comes with implicit confidence in our ability to serve him well, and who unhesitatingly places the hall or suite of apartments at our disposal, with full liberty to go ahead and make a nice job of it. In such a case it is a fortunate responsibility that devolves upon the florist, and he should be able to fulfil his commission in such a manner that it shall leave no opportunity for criticism on the part of people of refined taste.

These are the occasions which mean the upbuilding or the downfall of a florist's prestige. If he does not rise to the occasion, and is not capable of taking full advantage of his opportunity, or is negligent in it, then he proves himself unfit for the position he assumes, and he need feel no surprise when he sees a competitor outstripping him in his own territory. The character of the apartments to be adorned, the known tastes of the hosts or their guests, the nature of the occasion, all are important factors influencing the decorator in the choice of the material used and the manner of its application. Yet, with all these and other minor limitations, it remains true that the man who understands his business can adapt himself to the times and circumstances as to the material at hand, and make prominent use of that most easily available, and still score a pronounced success in his work; for consistency and harmony, not the material used, are the potential characteristics of the work of the true artist. Given the same room, under identical conditions, two or more

independent decorators might, and probably would, carry out the work according to different designs and in a very different manner, and one or the other might best please the fancy of different persons, so that the question of merit might be variously decided; yet each might be equally correct from an artistic standpoint. Then, conceding equal artistic merit to each, keeping qualities being also equal, he is the best master of his art who has achieved the result with the least expenditure.—W. J. S.

Notes on Bulbous Plants.

New Liliium, Mrs. T. Roosevelt.

The "Mrs. Theodore Roosevelt" is the name of a new Lily which has been hybridised by Joseph Tailby, of Wellesley, and received a silver medal from the Massachusetts Horticultural Society as being the finest novelty in the way of decorative plants ever hybridised in the United States. The new Lily (reports the "Globe") is about 2ft high, and resembles a sub-tropical plant, having large, dark green, silvery spotted leaves, and tall primrose yellow spathes. It is strong and hardy, lives out of doors, and is able to reproduce itself from seed.

Hyacinths for Baskets.

Our rather stiff friend, the Hyacinth, can be made useful in baskets. We tried it last winter for the first time, and I was perfectly delighted with the result. Instead of growing the Hyacinth in the old conventional way, it can now be made to curve its spike in a most graceful manner if arranged to grow in form of a hanging basket. The method of culture is so simple that even the most inexperienced amateur can easily manage it. First make up a ball of fresh sphagnum moss about 8in in diameter, into which insert the Hyacinth bulbs all round, binding them in with string and more moss so that only their points are visible. Then run a wire through by which the ball can be suspended in greenhouse or sitting-room window. No more attention will be required except to dip the ball in water about once a fortnight. Such hanging baskets can be effectively made with named or bedding Hyacinths, and also with Roman

Hyacinths. The open wirework baskets which are sold can be filled in the same way. The spikes, the points of which are turned downwards, try, of course, to turn to the light and curve upward more and more, so that when the flowers are in bloom, the lower spikes, growing from the bottom and the sides of the ball, all hold their flowers up to the light. You cannot imagine how pretty these balls are, both when the flowers are all of the same colour, in graduated shades, or mixed tints.—B.

Brodiaëas.

The genus *Brodiaëa* contains over twenty-three hardy species. The flowers, which for the most part are produced after the leaves and supported on slender stalks, are white or blue. Being easily cultivated, many of them are worthy of a place in a flower border. *B. uniflora* is a spring blooming species, and is perhaps the best known. But such species as *capitata* and *grandiflora*, both with blue forms, and *B. lactea*, a milky white

form, may also be added. *B. coccinea* is now included in the genus *Brevoortia*, under the name of *Ida Maia*; whilst *volubilis*, a curious and handsome plant, whose stalk assumes a spiral form, climbing 10ft to 15ft, is now called *Stropholirion californicum*. With the exception of *Milla biflora*, all the species of *Milla* are now consigned to the genus *Brodiaëa*. *M. biflora* is a beautiful half-hardy Mexican species, bearing pure white star-shaped flowers of waxy texture.—D. McG.



Oncidium pumilum.

C. Jones.



Rose Analysis.

(*Rosette de la Legion d'Honneur.*)

I am only one of thousands who have read with pleasure, and, I hope, profit, Mr. Mawley's Rose analysis. But there is one Rose—a very startling absentee, in my opinion—that I can not find in the list. I refer to Rosette de la Legion d'Honneur. Of course it belongs to the class of Garden or Decorative Roses, and yet it is conspicuous by its absence. I begin to think I am absolutely wrong in my estimate of this Rose, but it is one that has a very deep hold on my affection. I would be very glad to hear the opinion of "W. R. Raillem," or some other really competent rosarian, as to its merits and demerits.—H. B. B., Hythe.

Large Potatoes.

In reply to the question put under this heading by "W. B., Kent," in the Journal of November 12, I have to say that in the year 1862, in Archerfield Gardens, there was raised by me from a portion of a south border a crop of Walker's Regent Potato that was considered by everybody to be unusually heavy and remarkable. One Potato turned the scale at 3½lbs, and twenty-four weighed 44lbs. Mr. Hunter, late of Lambton Castle Gardens, can corroborate this, as he was the person who, with another, did the work of lifting and weighing the crop, which was quite as remarkable for its general bulk as were the individual tubers referred to above. In 1896, at Drumlanrig Gardens, there were raised from one row in one of the quarters, scores of tubers over 2lbs in weight. From one set the weight of produce was 1 stone 3lbs, and few of the tubers yielded less than a stone. I carried out many experiments in Potato culture, all of which prove that to plant very small sets resulted in poor results, and that medium-sized tubers, planted whole, gave the most desirable results, both as to the general weight of crops and size of individual tubers for cooking. The secret of heavy tubers I found to be in planting the largest possible sets whole, giving ample room, and allowing not more than two growths from each. It may be said that such heavy tubers are not desirable. That is true. Still, the last order I got from my employer at Archerfield before he left for the season was to be sure and grow him more of "those large Potatoes" as they were so splendid, baked in their jackets.—D. THOMSON.

Point Judging.

In reading Mr. Brotherston's attack on this method of awarding prizes (page 411), one cannot help wondering if the reactionary times in which we live have not unduly influenced his judgment. That judging by points has had a fair trial most people are perfectly well aware, and many of us are fully cognisant of the haphazard methods it was intended to displace. Its supporters have every reason to be satisfied with the results obtained from its application in numberless instances; and if it is not perfect, what then? In view of the benefits derived from its use, is Mr. Brotherston prepared to discard the system, and revert to the older method? I imagine not! It must be admitted that there have been times when judges would have been pleased that their names should have been sunk in oblivion when published in connection with awarded points. Have we not here one of the strongest reasons in support of "point judging"? Surely the publication of the number of points with the names of the judges should tend, save in the case of the most hardened sinners, to cause those worthies to be more than usually careful in their decision. Too much stress is also laid on the variability of the standard of judgment; and when the writer of the article asserts that the numbers provided as a standard are, as a matter of fact, no value whatever, he steps at once over the border line of prudence and care of statement. These numbers, to some judges at least, are not employed to give self opinion expression; that they could form a standard inflexible and unchanging is much to be desired, but more than can reasonably be expected. Judges are not automatic machines, and though the vagaries of some few may be deplored, the standard of judgment with the best of them is maintained on a fairly even keel, and the fluctuations and variations which Mr. Brotherston would have us believe exist to a great extent, are only existent to a very small degree; especially is this the case with those who are in constant and continuous practice.

I am tempted to ask Mr. Brotherston what, apart from the

"point judging" method, would he employ in awarding the prizes over a wide area of gardens and allotments? It is obvious to the simplest minds that where competing patches of land lie half a mile apart it is not by any means easy to carry their comparative merits in one's mind's eye; particularly is this the case when there are many competing, and the competition close. If pointing is not satisfactory under such circumstances, it is scarcely likely that decision by view alone would redound to the credit of the judges. "Of pointing, as a means of aiding judges to arrive at a correct decision in cases where the competition is close, I have nothing but praise," says Mr. B. As this was the strongest point urged in its favour by supporters at the very outset of its inception, I fail to see the value of the condemnatory remarks preceding its utterance, or why, in conclusion, it is stated that its public and compulsory applications should be of doubtful benefit.—JOHN WRIGHT, Newent.

Criticism from Sheffield.

Referring to the show of the Sheffield Chrysanthemum Society, a correspondent writes: "Unfortunately for the society, it is handicapped by a very heavy rent—between £50 and £60 for the two days; while the City Council has a large hall standing idle, and has declined to let it to the society on the ground that 'they hope to let it permanently.' This is the hall that was for very many years the home of the society, but which they had to leave on its coming into the hands of the City Council. Verily the 'Markets Committee,' like the 'Parks Committee' of Sheffield (save the mark!), are antagonistic to all that tends to the education and elevation of the people by floriculture. In probably no town or city do the authorities hamper such societies so much as in Sheffield." Pro bono publico?

A Gardeners' Association.

There is just now a movement on foot to establish a Head Gardeners' Association for the United Kingdom. The proposals that have led to the movement originated with one or two earnest and very able gardeners, men having ideas and endowed with a great desire to raise the gardener's status. How far the suggestions which have emanated from these gardeners may have proved practicable, or to whatever extent they may find support, has to be seen. Without doubt, the suggestions referred to originated from the recent gardeners' dinner, a function which brought so many of the craft together from all parts of the kingdom, but all too briefly, and in the end, to little effect. But the promoters of that gathering had no intentions or aims beyond those so successfully realised; whilst some who were present have wished that those intentions had been wider in aim, and had included the formation of some permanent organisation for gardeners, on the lines of the proposals now being made.

When the final meeting of the Dinner Committee was held for the purpose of receiving the statement of accounts and disposing of the balance, a letter from an eminent gardener was read, inviting the Committee before it was disbanded, to consider the desirability of forming for the United Kingdom an association of head gardeners for certain specific objects. The Committee, consisting as it did of head gardeners, unanimously agreed to the request, and I am authorised to convene a further meeting of that body at the Horticultural Club, by kind permission, on December 15 next, at two p.m., when any head gardener who may desire to take part in the deliberations and assist in the organisation of a Gardeners' Association, would be heartily welcomed. It would, however, be well that such persons should communicate to me that desire previously. The meeting will, of course, be private, because no good purpose would be served in publishing the discussion. Should the proposals take definite form, then, of course, the fullest publicity would be invited. Primarily, the aims of the proposers of the organisation are exclusive to gardeners, although, as one suggests, members of the horticultural trade or amateurs might be honorary members.

A few of the objects it is desired the proposed association should aim at is, the raising of the status of the gardener to a position superior to that of a mere domestic servant, and more on a footing of equality with those employes on an estate who are recognised superior heads of departments. The gardener is, as a rule, a man of bright intelligence and of wide knowledge, and, intellectually, is fully the equal of the agent, steward, or bailiff. Then it is thought that the education and training of under gardeners is too often far from being all that can be desired. It is too haphazard, and not sufficiently general and practical. A strong association might do much, especially through its members, to aid in that direction. Again, it is thought that a central organisation might be able to do much in aiding members to secure situations, a list of capable men seeking such being kept for reference. Each member who may learn of any vacancy being required to at once communicate such information to the central body. These are but a few of the ideas which animate the pro-

posers. No doubt many gardeners who are readers of the *Journal of Horticulture* have ideas in relation to such an organisation as is proposed. If they cannot come to the meeting on December 15, I wish they would kindly send me their ideas, as, when the meeting is held, the more reasons offered for the formation of a gardeners' association, the more likely is it that such a body may take shape.—A. DEAN, 62, Richmond Road, Kingston-on-Thames.

Apple, Annie Elizabeth.

In answer to E. D., page 442, I would say that with us at Crawley it is not a very certain cropper, but the fruits are undoubtedly solid, handsome, and very long keeping. It would be useful to have further reports about Annie Elizabeth.—C. S.

Violet, Lady Clifford.

In the last issue of the *Journal* I note a mention of this new, single-flowered Violet. Early in November I saw the batch of plants growing and flowering in the open in Lord Clifford's garden at Ugbrook Park, near Chudleigh. I was much impressed with the variety, and Mr. Abraham, the gardener, informed me how much more freely it flowers than Princess of Wales. It is certainly distinct from that variety in colour, being distinctly shaded with purple, and has a more clearly defined white eye. The flower is shapely, borne on stiff stems fully 10in long. For early autumn outdoor flowering this Violet should be valuable as well as for frame culture.—M. X.

Protection for Fruit Trees.

It is time to think if valuable fruit trees in the open can be protected against frost during the blossoming period; and what is the best means of doing it. I remember last year I had a profusion of promising bloom on Coe's Golden Drop, Transparent Gage, Denniston's Superb, Magnum Bonum, and Belle Louvain Plums, young pyramidal trees, and one morning the blossoms were quite blackened. This was owing to a quick shifting of the wind to the north, with a clearing, cloudless sky. I should like to know, from anyone who may have tried it, would thick meshed netting, tiffany, or any other material that might have been spread over those trees, have protected them from that killing frost? A week's or ten days' covering, over the critical flowering period, would not seriously injure the foliage, even though there was a partial exclusion of sun and light. It is plain our fruit trees must be protected if we are not to suffer the loss of the crops year after year. Would not Messrs. Rivers, Bunyard, or other large growers of extensive experience, deeply interested in the success of fruit culture, and in the realisation of the hopes of their clients, still further enlighten us? I can easily protect my wall trees, but it is different with Cherries, Pears, Plums, Apricots, or Peaches grown as bushes in the open garden. Successful culture is easy in favourable seasons, at least in the South of Ireland; but growers should be prepared for the worst, and take precautions accordingly.—W. J. MURPHY, Clonmel.

The Autumn Flower Trade.

The "Westminster Gazette" says: "Seldom has the autumn flower trade opened with such a varied supply of flowers as has been on show this year. In the wholesale markets are to be seen some very pretty novelties. Amongst them are Orange trees in pots in fruit, costing from 3s. to 5s. each, and along side of them Orange blossoms, worth from 1s. to 2s 6d. a spray. Scotch Heather has met a good reception, selling from 6s. to 12s. a dozen bunches. The white flowers are exceedingly delicate, and contrast nicely with the feathery sprays of Acacia, with their yellow, pollen-like bloom, from the South of France. Soleil d'Or Narcissus has made its appearance again, and the dealers are getting from 3s. to 6s. a dozen bunches for it. The Narcissus trade will be unusually extensive this year. The Orchid more than maintains its position as a commercial flower. We noticed some exquisite blooms of *Odontoglossum crispum*, priced from 3s. to 4s. a dozen wholesale. Lily of the Valley is making high prices, specials commanding from 15s. to 18s. a dozen bunches. Chrysanthemums are worth from 12s. to 36s. a dozen bunches. In pots the plants secure from 6s. to 36s. a dozen. *Lilium lancifolium* in pots made from 18s. to 40s. a dozen. Orchids in bloom from 2s. 6d. to 21s. a pot; whilst fine, free-flowering Roses sell from 6s. to 20s. a dozen pots. Hydrangeas and Cape Heaths are high priced; values here range from 12s. to 18s. a dozen pots. Roses are cheap at 1s. and 2s. a dozen buds, and market bunches of Wallflowers can be had from 2s. 6d. to 8s. a dozen."

The Dublin Naturalists' Field Club.

The nineteenth winter session of the club was inaugurated on November 3 with a conversazione in the house of the Royal Irish Academy, Dawson Street, Dublin. It was a pleasant, informal but instructive gathering. "Just tea and talk, and tailed coats optional," as the genial vice-president said in his kind invitation, otherwise the solitary member of the common gardener species who went in under his wing carrying a mysterious paper bag, would hardly have ventured where scientific professors and learned ladies forgathered galore. On that particular day a lively sample of the English snake had been captured in the College garden, where, thanks to our patron saint, they are rare, and that was the mystery of the paper bag which had his (or her) snake-ship wriggled out of, en route, whilst in charge of its bearer in the crowded tram car, would probably have ended its tale, and this one, too. However, it was safely staged in its glass jar amongst the many interesting exhibits of Irish and exotic flora and fauna, and finally sent to the "Zoo." The vice-president's paper on "Common Things," which he read to an ultra attentive audience was short, pithy, and to the point; Mr. Burbidge exhorting the younger members of the club to avoid the mistaken ambition of seeking great discoveries in their initial researches, and to note the beauty and interest pertaining to the common things around them. With the aid of some well-manipulated lantern slides, the lecturer further showed the natural instinct inherent in the bird world to concealment at nesting-time, as well as Nature's extraneous helps to the same end. The wonders of the microscope were well exemplified by instruments and specimens on the tables about the rooms, and many were delighted with an exposition by Mr. Gunn, who, in showing a skin section of the seed of *Collomia coccinea*, which, under the microscope, looked like a piece of rough bark, touched it with water, when innumerable spiral springs were seen to shoot out in all directions. This gentleman also showed a novelty in the way of seeds of *Anthoxanthum* (Sweet Vernal Grass) placed on a heated cardboard box lid, which immediately hopped, skipped, and jumped in a manner that Mr. Walter Rothschild's fleas might have envied in their liveliest moments. Such is animated nature in the great kingdom of silent life. A small group of interesting subjects from the plant wealth of Glasnevin was contributed by Mr. F. W. Moore, including various *Sarracenias*, the elegant *Trichinium Manglesi*, too seldom seen in private gardens. Very noticeable in this group were plants of *Mammillaria pusilla*, a dwarf Cactus with elongated coral-like berries; *Gonioscypha eucomoides*, with Arum-shaped leaf and curiously dull inflorescence; a good potful of the Australian Nardoo plant, and the distinct and graceful *Pilea spruciana*. More tea and talk wound up an evening so pleasantly instructive that the gardener-visitor cannot but heartily wish all success to the Dublin Naturalists' Field Club, whose members in their unobtrusive studies "Trace in Nature's most minute design the signature and stamp of power Divine."—K.

Water and Bog Plants.

Mr. Townsend, Sandhurst Lodge Gardens, recently read a paper on "Water and Bog Plants" before the Reading gardeners. The lecturer has made a study of these plants, and a visit to the gardens under his care is always a source of pleasure and delight. The first portion of the paper was devoted to the *Nymphæa*, which, of course, forms the principal feature of the water garden. It was pointed out that a fine Water Lily can be grown in a tub or earthenware pan. This should be sunk in the ground in any sunny position, put in 6in of good garden soil, plant your Lily, and fill with water. Make the water overflow a little about twice a week with rain water or water from a well that has previously stood in the sun for a few hours. Ponds with cement bottoms were dealt with, but the most suitable position for a water garden is where there is a small spring in a sheltered position in the full sun, or one that can be made so by planting flowering shrubs and trees for shelter and effect. Varieties were then given, and the depth of water most suitable to flower them freely. The collection at Sandhurst includes all the leading varieties, and too numerous to mention here. Other plants touched upon were *Aponogeton distachyon*, *Hottonia palustris*, *Anagallis*, *Villarsia nymphæoides*, *Ranunculus aquatilis*, *Caltha palustris*, *Pontederia cordata*, *Sagittarias*, *Cyperus*, *Mimuli*, *Calthas*, *Iris Kämpferi*, *Lobelia cardinalis*, *Gunnera manicata*, herbaceous *Spiræas*, *Senecio japonica*, Daffodils, and Wood Anemones. The lecture was made doubly interesting by a series of lantern slides reproduced from photographs taken by Mr. Townsend himself. A good and profitable discussion followed, in which Messrs. Judd, Lever, Neve, Hinton, Alexander, Duffitt, E. Dore, D. Dore, Fry, Herridge, Prince, and Stanton took part. A hearty vote of thanks was accorded Mr. Townsend for the enjoyable evening he had afforded the members.



Apple, Middle Green.

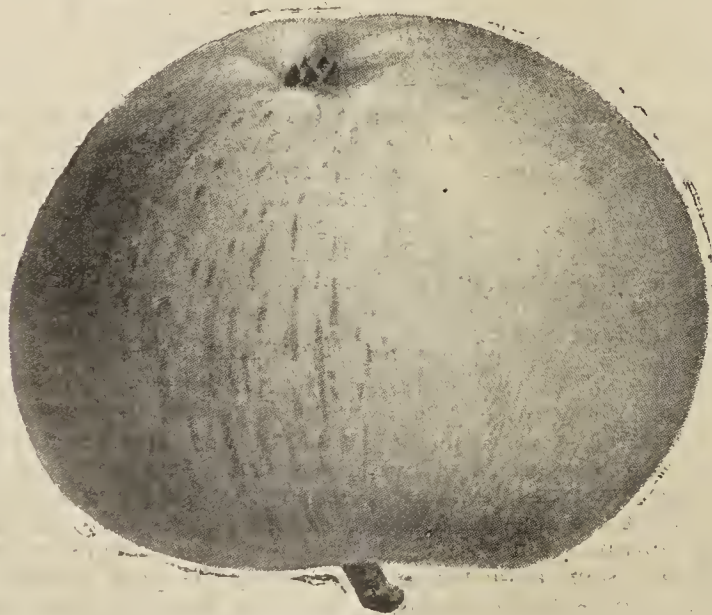
Fruit, medium size, two inches high and the same in width; round, even, except for a characteristic rise or tiny hump on one side next the eye; skin smooth, rich greenish yellow—a bright, beautiful colour—prettily flaked and mottled with crimson on the sunny side, the mottling giving it a russety shade on this side. Eye open, with reflexed segments, set in a moderately deep, slightly furrowed basin. Stamens marginal; tube short, funnel-shaped. Stalk half an inch long, nearly straight, stout, and covered with greyish felt. It is set in a deep round cavity. Flesh yellowish-white, firm, very juicy, rich and sugary.

An excellent dessert Apple of first-rate quality. Mr. Seden, manager to Messrs. J. Veitch and Sons, Limited, at Langley, says of it: "The tree has a good habit, is robust, and a good bearer."

Strawberries in Pots.

All plants for early forcing should be placed in frames, with a view to protect them from heavy rains and snow. Severe frost does the plants no good, and often harm, by destroying the tender fibrous roots, while heavy rains and snow often cause the drainage to become much choked. In frames, and plunged to the rims of the pots, the plants are quite safe, only take care not to allow any to become and remain dry at the roots, to use the lights only when heavy rains prevail, and then with them tilted at the back, and closed when snow and frost occurs, otherwise drawing off the lights.

If protection by mats is given in severe weather, the plants can be removed at any time as required for forcing. One of the commonest and worst practices is to pile the pots, plant outward, in a sort of half-cone against a wall, packing them in sawdust or soil; and the consequence is they get frozen through, and the roots injured, whilst not a few suffer from drought, as they are practically unavailable for watering. A greater mistake is made in placing the plants in borders in a Peach house with open ventilators, where the currents of air, being constant and excessive, provoke evaporation that simply wastes the energies of the plants, and mostly destroys the roots at the sides of the pots. It is a better plan to stand the pots on a foundation of ashes in a sheltered position, and surround them with ashes level with the rim of the pots, affording them a slight covering of straw or bracken in severe



Apple, Middle Green. A.M. October 13.

weather. This answers very well for midseason and late forcing plants, they being removable at any time, and take no harm, only if frozen the plants must be thawed in a house not much above freezing point.

Where there is the convenience of a Strawberry house, and the fruit is required early, say in late February or early in March, a batch of plants may be introduced at the latter part of November or beginning of December, placing them on shelves near the glass, and only employing fire to exclude frost at night, and to maintain a temperature of 50deg by day, at and

above which ventilate freely. The plants forming this batch should be the earliest matured, with well formed crowns, and of the most approved early forcing varieties, than which we have not found better than La Grosse Sucrée, Royal Sovereign, and Vicomtesse Hericart de Thury. The old Black Prince is earlier and forces readily, but is very liable to mildew, which often ruins the crop.

Where there is convenience, and the crop is required very early, or when the plants are backward, it is a great aid in early forcing to afford the plants the benefit of a slight warmth at the roots by making up a bed of leaves about 2ft in height, placing the plants in a frame or house upon it, packing the space between the pots with damp leaves. The bottom heat at the base of the pots should be 65deg, the top being kept cool, 50deg not being exceeded; and when mild draw off the lights. This will promote activity at the roots, and the crowns will push little or nothing; yet the plants, after a month of this treatment—the bed then being cool, or the pots withdrawn in preparation for removal to a vinery just being started—will go right away without having the leaves drawn or the trusses weakened by being placed direct from cool quarters in a house almost warm enough when started for the Strawberry when in flower. In fact, plants with well developed crowns and abundant roots do not always succeed in a vinery, because they are brought into flower too rapidly; but treated in the manner advised, excellent fruit of La Grosse Sucrée may be had in March from a vinery started at the new year.—G. A.

Figs: Earliest Trees in Pots.

To have ripe fruit at the end of April or early in May the trees should be started in December, and they must be of the early varieties. After trying most, I find Early Violet, St. John's, and Brown Turkey reliable in the first crops, and giving a succession of fruit. Dress the trees with an approved insecticide, and stand them on loose brickwork pillars, so that they may not settle with the fermenting materials, which being placed in the pit and brought up about the pots will afford gentle warmth and genial moisture, but the heat about the pots must not exceed 65deg until the trees are fairly in growth.

The top heat may be kept at 50deg to 55deg at night and 65deg by day, the trees and house being damped in the morning of fine days, and again in the afternoon, but it must be done sufficiently early to allow the trees to become fairly dry before night. Water must be given at the roots to render the soil evenly moist, supplying it at the same temperature as that of the heat about the pots, but avoid overwatering or a wet condition of the soil, as that neither favours root formation nor a steady development. Also avoid a close moist atmosphere. The moisture arising from the fermenting material, with an occasional damping of the paths and walls, will be sufficient in dull weather.

EARLY FORCED PLANTED OUT TREES.

The earliest house should be closed in December to have ripe Figs in May. Where, however, the earliest Figs are obtained from trees in pots, starting the trees in borders may be deferred until the New Year, so as to afford a succession. Planted-out trees, even with the roots confined, as they should be for early forcing in narrow borders, will not ripen the fruit so early as trees in pots with the aid of bottom heat; hence, if started at the same time, they will afford a close succession to that from trees in pots. The trees having been pruned and dressed with an insecticide, the house thoroughly cleansed, and the border top-dressed, attention may be given to the moisture of the border. Assuming the soil has become dry, apply water in a tepid state at the roots at frequent intervals, until the soil is thoroughly moistened through to the drainage, but not made sodden by over-supplies. In the matter of temperature, proceed as for the trees in pots.

St. Louis World's Fair.

Under the classification of pomology, its appliances, methods, and products, there will be installed in the Horticulture Palace of the Universal Exposition of St. Louis, 1904, displays as follows:

POMOLOGY.

Pomaceous and stone fruits: Apples, pears, quinces, cherries, plums, peaches, apricots, nectarines, &c.
Citrus fruits: Oranges, lemons, limes, shaddocks, pomeloes, &c.
Tropical and sub-tropical fruits: Pineapples, bananas, guave, mangoes, tamarinds, figs, olives, sapodillas, &c.
Small fruits: Strawberries, raspberries, blackberries, dewberries, gooseberries, currants, &c.
Nuts: Almonds, chestnuts, filberts, hickorynuts, walnuts, &c.
Casts and models of fruit in wax, plaster, &c.

ARBORICULTURE.

Fruit trees and methods of propagating, planting, growing, training, pruning, &c.

APPLIANCES AND METHODS OF POMOLOGY.

Tools for nurserymen: spades, picks, hoes. Tools for pruning, grafting, gathering, packing.



Chrysanthemum Mr. J. P. Bryce.

I must confess surprise when I saw the above variety obtain a first-class certificate at the hands of the Floral Committee of the N.C.S. as an incurved variety. Personally, I thought it belonged purely to the Japanese incurving section. The florets are broad, and incurve much too loosely to justify its inclusion in the section where placed. Until such an authoritative body as the Floral Committee of the N.C.S. are more stringent in their awards, we cannot hope for a higher standard in this much-degenerating section. This is not the only instance either where certificates have been misapplied in this section. Was there ever a more glaring error than to place President Bevan in the list of incurved? This season has well served already to prove how absurd such classification is. In several instances I have noted this variety in such a condition as to fit it thoroughly to take its place as an incurved Japanese. Instead of this we find it alongside of C. H. Curtis! Never was a comparison so odious when thus placed.—AN ONLOOKER.

Chrysanthemums and their Names.

Your frequent correspondent "W. S." has some notes under this head on page 420. The same title will serve me, though my notes bring forward "names" in another aspect to that considered by the above-named. We all know that the daily and general newspapers usually make remarkable errors when plant names are dealt with. Do the reporters not write clearly? Are the names wrongly spelt on the labels they write from, or are they illegible? Both faults, alas! are too common, and thus the grower who labels is to blame, and not the newspaper reporter. However the following names originated I do not pretend to explain (they are from the "Hastings Times"), but they will amuse some of your readers, without a doubt. The paragraph conveys a notice of the Chrysanthemums in Alexandra Park, Hastings. Thus the rendering: "Mrs. G. Harmer Paine, Rayon Ante, Mrs. Coombe, Mrs. Harry Emerton, Mrs. Jas. Besant, Soliel de October, Col. W. B. Smith, Madame Chervant, Jane Molyneux, Princess Alice de Monaco, Sœur de Pettie Annie, F. Phœbus, Mrs. C. S. A. Wood, the Princess M. Louie Renny, N. G. Newitt." It is only fair to add that twenty-two which were given correctly are here omitted.—T. E.

At Dewsbury Park, Yorkshire.

Four hundred plants, with two and three blooms each, are grouped in the centre of a span-roofed house. These comprise Japanese, incurved, and a few Anemone flowered varieties. Collectively they make an imposing display, and are remarkable for the fresh and healthy appearance of the plants, and for the bright appearance of the blooms. Around the side stages are arranged 400 of the cream of all sections. These are closely tied-in to supports in the form of a quarter circle, and are a distinctly pleasing feature, well worth imitation. When examined in detail, the high quality of the blooms is very marked, the Japanese being of great depth and highly developed. Incurved blooms are particularly good, especially the "Queen" family, which have that globular build so much desired, but seldom attained in such perfection as here seen.

Anemone-flowering varieties in the leading sorts are in good form, and although not so striking in appearance as their giant relatives, they possess a fascination for many people, including the writer. The best of the new Japanese as seen here are George Lawrence, General Buller, Meynell, Mafeking Hero, Godfrey's Pride, Mrs. F. S. Vallis, Hon. Mrs. A. Acland, Lady Conyers, and John Fraser, the latter remarkably fine, similar in colour and form to Lord Brooke, but vastly superior. It is one of Wells's. Strikingly good amongst the older sorts I noted Elsie Fulton, Australie, Mrs. Cleeve, Mrs. T. A. Compton, Marquis V. Venosta, Matthew Smith, Mrs. Greenfield, N.C.S. Jubilee, all the Vivian Morel family, including the white Mrs. J. Ritson, with such blooms as are seldom seen. Mrs. T. W. Pockett in 6in pots, one bloom to a plant, was fit for a show board in the most select exhibition.

Mr. Daniells is well known in the North of England as a successful grower and judge of the "Autumn Queen," that it is almost superfluous to add that the collection reflects the highest credit on him and his assistants. The people of Dewsbury are justly proud of their annual show of Chrysanthemums in their well-kept park, and none who see it will care to dispute their claim that they have one of the best displays in the North.—R. CRAIGIE, Mirfield.

Chrysanthemum Show Dates.

It would be well if many societies would follow the lead of the undermentioned in fixing the date of their shows thus early, giving other societies an opportunity of arranging their fixtures so as not to clash with each other, except where absolutely unavoidable. The N.C.S. should set an example to other shows in this detail. Many societies wait until the central body, as it is sometimes termed, announces the date of its shows before they arrange. This early selection of dates should be followed as quickly as possible with the issue of the prize schedule, so that cultivators may have an opportunity of providing fully for the various classes included in an up-to-date schedule. When this latter is not issued until April, May, or June, what wonder then if some classes are but indifferently filled? The following societies have fixed their 1904 shows as follows: Cardiff, November 2, 3; Winchester 9, 10; York Chrysanthemum, November 11, 12, 13.—E. MOLYNEUX.

Seedling Chrysanthemums at West Hall, Byfleet.

Year by year the difficulty of raising improved varieties of Chrysanthemums becomes greater, but this does not deter Mr. G. Carpenter from giving seedlings considerable attention. This year, or rather from the selected few of last season, he has obtained two which should be heard of when the stock becomes distributed. They are A. C. Stevens and Miss Ellen S. Kerr. The former is light yellow—the shade of Soleil d'Octobre. It is a full, deep, reflexing bloom, of much substance, and very handsome; and what is important too, it has a first-rate habit of growth, very dwarf and sturdy. The latter is a creamy white, and may be compared to a gigantic Nellie Pockett. The habit of this is sturdy, so stout, in fact, as to resist the "rust" in a remarkable manner. Maybe exhibitors do not care so much for the habit of a plant, whether tall or stout, so long as the well-developed blossoms can be had; still, if a variety possesses sturdy foliage, it is a good deal in its favour. Both of the above named sorts should be noted. They will probably be exhibited, and many growers, at least, will be able to see for themselves. One other, named Mrs. F. C. Stoop, a bright pink flower, appeared most promising, but in an undeveloped state as I saw it it is early to judge properly of its merits.—H., Woking.

A Grand Exhibit at Weybridge.

One of the members of the Weybridge Chrysanthemum Society has presented a really valuable cup in competition, and asks for a dozen Japanese blooms, the winner to take it three times before it becomes his absolute property. It is stipulated also that the winner must be the grower of the flowers. This cup, then, is likely to create rare interest in a neighbourhood that can claim some first-class cultivators. The first winner is Mr. J. Lock, gardener to Sir C. Swinfin-Eady, Oaklands Lodge, Weybridge, with an exhibit that has seldom been equalled. The character of the blooms may be gauged when it is stated that in the back row were specimens of Mrs. F. S. Vallis and Henry Perkins 10in deep, and in the front row grand, deep, well-coloured examples of W. R. Church and Edwin Molyneux. I was anxious to see the plants that had produced the blossoms, and the thing that struck me as being out of the common was the amount of room given to each. Mr. Lock is careful not to grow more than he can manage, and that he has tended well to their wants there is ample illustration. I have seen stronger plants, but not specimens better ripened, thus pointing to the value of plenty of space, especially in a season such as we have passed. Light and air, and a goodly amount of sweet loam for the roots to ramble in will do more in the way of producing handsome Chrysanthemum blooms than fanciful fertilisers.—H. SHOESMITH.

A Fine Group of Chrysanthemums.

At the recent exhibition of the Guildford Chrysanthemum Society, the first prize group of R. N. Stevens, Esq., Woodham Hall, Woking, was something worthy of more than passing notice. It resulted in winning a valuable cup outright. Mr. A. E. Seabrook, the gardener, staged the best group three times. It has taken five seasons to do it, so that the reward has not been easy to obtain. On this occasion one of the judges stated that he had not seen a better group during the past twenty years, which is the same as saying it was the best, because grouping before that time was quite without note. The wonderful quality of the blooms was the leading feature in this instance, on plants exceedingly dwarf and with foliage free from any fault. It is not too much to state that Mr. Seabrook might have cut blossoms from his group and beaten any that were exhibited in the cut flower stands. A bloom (Guy Hamilton) was selected as the best Japanese of the whole show, and was growing on a plant in a 7in pot. Probably two other specimens were in the running for that award had not this splendid white obtained it. Australie, Princess Alice de Monaco, Mrs. G. Mileham, Miss Alice Byron, E. Molyneux, Hero of Omdurman, Mrs. R. Darby, and Mrs. Greenfield. These were a few of the varieties which seemed especially striking. All, however, were capitally timed, and very fresh and clean.—S.

NOTES

NOTICES

Woolton Gardeners' Society.

There was a capital attendance of members at the opening meeting of the session held in the Mechanics' Institute, Woolton, on Thursday last, to hear a lecture by Mr. R. Wilson Ker on "Hardy Flowering Shrubs and Trees." The Rev. William Mellor occupied the chair. The lecture was illustrated by about eighty splendid limelight views, many of which were kindly lent by Mr. George Gordon.

Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, November 24, in the Drill Hall, Buckingham Gate, Westminster, 1 to 4 p.m. A lecture on "Pomology as a Study," will be given by Mr. Lewis Castle, F.R.H.S., at 3 o'clock. At a general meeting of the Royal Horticultural Society, held on Tuesday, November 10, forty-five new Fellows were elected, making a total of 1,281 elected since the beginning of the present year.

Illustrations of Conservatories.

Again we return to the consideration of winter garden conservatories, and by the kindness of Messrs. Mackenzie and Moncur, Limited, the renowned horticultural builders and heating engineers, of Balcarres Street, Morningside, Edinburgh, we are able to present types of these structures made by them. Good material and thorough workmanship are conspicuous in the undertakings by this firm, and if these essentials are wanting in work of this nature, or in building-construction of any sort, is there either pleasure or utility in them? The conservatory at Philiphaugh, Selkirkshire, is a very fine one, certainly one of the most elaborately finished of any in the kingdom; and the glass at Philiphaugh is all of an up-to-date pattern, and of high quality. An adjacent conservatory of a similar type is that at Farmleigh (co. Dublin), and the study of either of these conveys impressions for the guidance of anyone who may contemplate such additions. If possible, attached conservatories should be distinctly architectural in treatment. As a rule, they are not houses in which to grow plants, but rather as show places.

Obituary: Mr. Abraham Newell.

The death of Mr. Abraham Newell, gardener to the late Sir E. Saunders, and later to Lady Saunders, at Fairlawn, Wimbledon Common, took place at Fairlawn on the 11th inst., at the age of 52 years. He had been in weak health for several weeks past, and gradually became worse until he died on the above date. He was for many years a member of the National Chrysanthemum Society, and was an active member of its executive and other committees. He also exhibited at some of its shows, furnishing charming groups of winter-flowering plants. He took an active part in the management of the Wimbledon Horticultural Society, being also a constant exhibitor, and also at Richmond, Putney, and elsewhere. Mr. Newell was a native of Norfolk, and when a lad he developed a taste for gardening. When nearly eighteen he made and exhibited a model garden at an exhibition of the Stow Horticultural Society, which attracted the attention of Lady Hare, and led to his being taken into the garden of Stow Hall under Mr. Orr. Here he remained for five and a half years, eventually becoming foreman; and left there to take charge of the gardens at Fairlawn—a position he filled up to the day of his death, a period of twenty-four years. Fairlawn had, a few years previously, been laid out by Sir Edwin Saunders, from plans furnished by the late Mr. Marnock, and here Mr. Newell found ample scope for his abilities, and was able to add many finishing touches from time to time. He was a good all-round gardener, and did a good deal of exhibiting in his day, and had always admirably-grown subjects, such as Chinese Primroses, Begonias, &c., and the conservatory at Fairlawn was always bright with flowering and foliaged plants. He leaves a widow and son. He was laid to rest in Putney Vale Cemetery on Monday, the 16th inst.—R. D.

Appointment.

Mr. Frank Fennimore, for the last thirteen years head gardener at The Wyldes, Hampstead, has been appointed head gardener to M. Catty, Esq., Myrtlewood, North End, Hampstead.

Canadian Apples for England.

It is stated by the "Canadian Gazette" that, owing to the annually increasing acreage of orchards in Canada and the facilities for shipping, together with the unprecedented demand in England, incidental to the total failure of the home crop, the imports of Apples from Canada during the season 1903-4 may reach 1,500,000 barrels. Nova Scotia has 500,000 barrels to send.

A Wise Tree-planting Scheme.

The Marquess of Bute has given instructions for the immediate carrying out of a most important tree-planting scheme, which will not only afford welcome employment for some little time, but will eventually greatly add to the beauty of one of the finest scenes in Scotland, namely, the Kyles of Bute. The supply of native wood for railway, colliery and such purposes is getting rather scarce, and apart from the æsthetic aspect there can be no doubt this scheme is a most promising commercial one. It is believed that a good many thousand pounds will be invested.

Annual Dinner of the N.C.S.

The annual dinner and presentation of prizes will take place in the Caledonian Salon, Holborn Restaurant, High Holborn, W.C., on Wednesday, November 25, 1903, at 6.15 p.m. sharp, Charles E. Shea, Esq. (President of the Society), will preside. The committee are most desirous that as the annual dinner will be the first occasion of meeting the new president, the members will make a point of being present, and particularly requests the presence of exhibitors at the November show entitled to receive cups or medals. In order that adequate accommodation may be provided, all tickets not returned by November 23 will be considered as sold. The challenge trophy, the Holmes' Memorial, and other cups and medals will be presented to the winners during the evening. On this occasion the presence of ladies is specially desired.—RICHARD DEAN, Secretary.

Dahlias at Ottershaw.

The pretty little village of Ottershaw, near Chertsey, seems to have its ground chiefly occupied by nurseries, and the well-known nursery of Fletcher Brothers holds the chief position. Mr. W. Eacott, a gardener in a neighbouring place, with the help of his partner, is able to grow a large collection of Dahlias for supplying the trade and private growers. We found they had not made so much rank growth as one would have expected in a year like this, but the plants were covered with some good blooms. Prominent amongst them was the following:—J. H. Jackson, brilliant crimson maroon, very large, and one of the best; Lord Roberts, a splendid white Cactus; Red Rover, described by the grower as the largest Cactus he had, clear crimson scarlet; General French, a warm terra-cotta; Mrs. Edward Mawley, a very fine yellow; and many other Cactus and show Dahlias. There was also a good collection of Pompons.—A. J. B.

Proposed Horticultural College at Wisley.

The Surrey Education Committee (says the "Standard") have under their consideration a memorandum, prepared by Mr. J. R. Dunstan, Principal of the South-Eastern Agricultural College, at Wye, and Mr. H. Mason, Secretary to the Committee, on the question of the desirability of establishing a horticultural college at Wisley, Surrey, in close proximity to the gardens there recently presented to the Royal Horticultural Society. The suggested college would be regarded as a branch of Wye College, which is maintained by Surrey and Kent, and it is believed that the Royal Horticultural Society would be willing to co-operate in the matter, and be prepared to give facilities for students receiving scientific tuition in the college to have practical instruction in horticulture in the Society's gardens. It is suggested that a forestry station, financed by the Board of Agriculture, might be established in connection with the college. Information as to the Society's intention in connection with the new gardens at Wisley is awaited before a definite proposal is put before the Education Committee and the County Council.



Notes on Some of the Newer Roses.

(Concluded from page 440.)

Mamie, the last on the list of H.T.'s, first shown as Mrs. Conway Jones (I hope Messrs. Dickson will not alter the name under which a Rose has once been shown; if they can avoid it), is a Rose whose manners and customs have puzzled me much. I had a pot plant of it from Messrs. Dickson in June, 1901, when it came out of the usual calibre, and had sufficient growth from it to be able to bud four or five standards. The maiden growths proved last year, to my surprise, extremely weak, and the plants no good whatever, either that year or this. Later, last year, I had a bloom on the original dwarf (I suppose grafted) plant, which pleased me much, and I budded three or four more standards; and later still the original plant sent up an unusually strong shoot for a grafted plant. Once more, this year, the budded standards have been utterly weak and useless, while the original dwarf plant has yielded me two or three of as fine hot-weather show blooms as could be wished. Needless to say I have taken the hint and budded it this year largely on dwarf stocks, and if this really is its preference, it is decidedly an unusual "custom" for a Hybrid Tea. The flowers were large, of good shape and colour, and very solid and full; they proved to be decidedly the best Roses to last that I have ever cut, except from the pure Teas. I showed one flower at two successive shows, both of which were hot days; and though I have often managed this with Teas, I never have done it before with any other Rose, and it would be very rarely that one could do it with Tea of this colour, a rather deep pink. It seemed to me a variety that requires hot weather, and does not require to be tied up—both of which are very good qualities. I think it should prove very useful indeed to exhibitors, and would recommend those who have not yet tried it to get dwarf plants.

There is another H.T., Robert Scott (Robert Scott and Son, 1901), of the same year, which Mr. Mawley did not put forward as a candidate in the new Rose Election, though it appears in his general Analysis. This Rose, we have been informed by the raisers, is a cross between Merveille de Lyon, H.P., and Mrs. W. J. Grant, H.T. The flower bears occasionally some resemblance to Her Majesty, and cannot fail to raise once more the question, What is a Hybrid Tea? Her Majesty was, we have been told (but I do not know whether the information came from Mr. Bennett or anyone authorised by him) a cross between Mabel Morrison, H.P., and the old Tea Canary. If so, Her Majesty was, by birth, not H.P. but H.T. But the N.R.S., I believe, decide the class of any Rose, not by birth certificates but by individual characteristics. By both of these tests Robert Scott should be H.P., not H.T., for it is not only a cross between H.P. and H.T., while Her Majesty, called H.P., is a cross between H.P. and T., but in all its characteristics is essentially H.P. Nevertheless, being a loyal member of the N.R.S., and not inclined to play the part of a "passive resister" H.T. it will be with me as long as authority so decides.—W. R. RAILLEM.

New Rose, Urania.

This new Rose is one of the productions of M. H. Walsh, of Woods Holl, Mass. A seedling of American Beauty crossed with Mdle. Suzanne Marie Rodocanachi, it has all the good characteristics of the American Beauty excepting the strong characteristic fragrance, and is of a lighter and much more glowing colour. The foliage is heavy and waxy.

The Ebb and Flow of Gardening.

"Gone to the dogs! They're marketing"—the answer verbatim to enquiry anent a once noted garden. What dogs have to do with the deplorable decadence in many of the high places of the gardening world, unless it be that much growling goes with it, it is hard to say; but the fact remains that the perversion of grand old gardens into market growing establishments is, unfortunately, becoming more and more evident. There seems to be, too, some inseparable connection between going to the market and going to the dogs, for once a start is made in selling the surplus, a run on the down grade seems quick and easy to the canine ending. *Sic transit gloria horti.*

The marketing phase of private gardening is as insidious and infectious as it appears to be demoralising. Poverty probably started it, custom oft continues what necessity no longer impels, and example spreads this commercial culture until it appears likely to permeate the whole land.

Judgment is formed on personal knowledge, which, in the case of gardeners, is often gleaned from a restricted area of observation; and these remarks, emanating, as they do, from a district where a form of marketing madness not only runs rampant, but is highly contagious, the trend of opinion may, possibly does, reach the other extreme. Market growers and nurserymen have hitherto suffered in silence, but with high rents, increased taxation, and the additional burden of this illegitimate competition, the wisdom of seeking protection for themselves will sooner or later be forced upon them.

Free trade, in this instance, is not fair trade, and with the very pertinent, but at the same time, very bad example, of the gardens attached to the residences of high Government officials, for the upkeep of which certain sums of public money are granted by the Board of Works, being transposed into, practically market gardens, should be sufficient excuse for broaching the theme if any excuse is wanted. Not only is it that the market grower, pure and simple, is affected; viz., those who cater for the vegetable and fruit supplies of our city, but in the bad examples referred to, local nurserymen and florists have to compete with nearly all the products of the glass department from these places, including plants and forced flowers. Anything, in fact, which will make money, although the family's supplies are considered; but the chief end and aim is, although it may not be acknowledged, *the market.*

Seedsmen suffer, although this is not apparent at first sight, but where large batches of "stuff" are manufactured for the market, the one-time nobleman's gardener—still retaining the title by courtesy—who is now perverted or converted, which you will, into a market man, is apt to send for his Aster seeds or what not to Germany, and obtain his bulbs from wholesale dealers in Holland, anywhere, in fact, by which a saving is effected. Apart, however, from all practical considerations which are, probably, powerless to alter existing conditions, or even stop them, in going from bad to worse, the deteriorating effect of marketing in private gardens must always be a matter of regret. Over the entrance to many might be suitably inscribed Ichabod, its glory has departed, and in all human probability it has ebbed never to return. In other channels is the returning flow diverted, and there is more than a little satisfaction, if not compensation, in contemplating this aspect of a great question. Within touch of our large industrial centres the number of comparatively small gardens has increased by leaps and bounds, and cultured taste generally directs the disposition, laying out, and planting of them.

Great ruins, in the way of grand old gardens on the down grade have, in a measure, paved the way to greater glories in the number of smaller but beautifully kept expositions of taste and skill. Needless to say, the bulk of these are not show places in the usual acceptation of the term, and can never quite take the place in the horticultural world of the garden of many acres and many men. Nor do the head gardeners themselves fill the same niche in the temple of Flora and Pomona. In many of these pretty and often picturesque places privacy is so rigidly enforced that our worthy head gardener can only show off his handiwork to his chums by stealth, whereas there are, or were, but few of the high-class gardens to which any man with a right to the style and title of gardener did not carry with it the right of entry. It is well known, if seldom mentioned, that the proprietors of the smaller gardens occupy, as their gardeners do, and as their gardens do also, a different niche in the social edifice, and in saying so there is no reason why any disparagement of the trinity should be inferred. These employers, as a rule are smart men, and smart masters make smart servants. They are seldom at home during the early part of the day, but when they do arrive bring with them a balance of those electrical conditions of vitality which the Stock Exchange or directors' board room fails to absorb; hence the head gardener or his man, or men, are generally prepared to finish up their day's work pretty lively when the "boss," refreshed by his cup of tea, comes out to inspect or help as the case may be.

What the employer wants in gardening knowledge is usually made up for—more than made up for—in his ability to make things "hum," and his gardener requires a good deal of tact as well as push to keep things running smoothly. Many a man having occupied a high position



Macdonald & Co. Limited, Ltd.

Exterior, Philiphaugh Conservatory. See page 464.

in the gardening world finds himself "out," and rather than remain so, in taking up one of these positions is like the proverbial square peg in the round hole—unless his good sense and adaptability prompt him to fit as well as fill the changed position. Then, if he really endeavours to please the employer as well as himself things probably turn out very happily and comfortably for him. Severely exact, and intensely practical in the matter of time and money as the gardener's employer in Suburbia undoubtedly is, a good deal of helpful sympathy oozes out towards a loyal honest, and capable servant, and many who in their earlier tenure of office find nothing but a stern, exacting master are, as occasion serves, made aware that they have a sincere and just friend. Here, on the smaller scale, some of the finest examples of culture are to be found, the outcome of that keen but quiescent competition which is perpetually prompted by the employers to have things not only as good, but a little better, or bigger, or brighter than their neighbours; and the man in charge must be well prepared to hear a good deal of critical adjudication which goes on in the Stock Exchange, as well as other men's methods, with minute details of soil, manure, and situations.

In this class of garden there is considerably less margin for failures than in those of the higher order. Master and man, conjointly, are apt to worry out the cause of any particular failure with fruit, flowers, or vegetables with indefatigable pertinacity, and in these middle grade gardens high grade culture is often carried out to the extent of proving a revelation to many front rank gardeners when they do have an opportunity of seeing it. In latter days the big firms' travellers often find their whole battery of persuasive eloquence and diplomacy powerless to extract the big orders they were wont to do in times of yore, and gladly turn to the smaller places in which, as a smart young commercial said, there is salvation for them. And perhaps it is not saying too much in this slight understudy of the ebb and flow of gardening that they form now the backbone of English horticulture.—Quiz.

heavy work, such as threshing. Under these circumstances horse power, water, electricity, oil, or steam are to be preferred. On lower parts of the country, many estates are very badly supplied with water. It is only in exceptional cases that a supply is not available on some part of the farm or estate, but it often happens that the house, farm, or land which it is desired to supply is at a higher level.

The windmill is the ideal power for this kind of work, and, according to the recent trials of the Royal Agricultural Society of England, there are several makers who supply these of a class suitable for a wide variety of circumstances and of a thoroughly reliable nature. For pumping water one prime requisite is necessary if satisfactory results are to be obtained. That is the provision of a storage tank of suitable capacity to meet the requirements of the case for about fourteen days. The meteorological observations made in this country indicate that certain periods of dead ealm are occasionally experienced, extending up to fourteen days, so that where the supply is for household purpose the storage capacity should not be much less than that amount. This may be carried out in many ways, but in the country, where there often is some hill or piece of land higher than the building to be supplied, it should be taken advantage of. A tank of brick and cement should be constructed on or in this height, and the water pumped into it continuously, the supply being conveyed by gravitation wherever wanted.—("Scottish Field.")

Hybridising and Crossing Plants.

Hybridisation cannot be called new. It is, perhaps, impossible to discover who first practised it. Is it too much to suppose that, in bygone centuries, when, especially in the East, sages became well acquainted with the habits of insects, and found them a source of telling imagery, when farmers tended vast flocks and herds, and cultivated wide tracts of corn, some one might have come to understand the mechanism by which the full corn in the ear is secured, might even have gone so far as to imitate Nature, and obtain new varieties of the plants. It would seem that Theophrastus perceived the efficacy of dusting the fruit-bearing flower of the Palm with the powder

The Windmill.

In our country, where wind is so prevalent, it is a wonder that these motors have not been taken more advantage of. Here water has been used to probably a greater extent on the average garden or farm than in any country, and that very likely in great part accounts for it. There is, however, plenty of room for both powers. In the hilly districts, where the rainfall is abundant and a sufficient fall is easily obtained, water power will long remain a first favourite. In the drier and flatter districts wind might often be more utilised than it is. For garden, nursery, or light farm work, such as pumping water, where one or two weeks' work can be done at a time when the weather is suitable, it is questionable if it can be done so cheaply by any other power. For work which has to be done daily, such as root pulping or slicing, they are unsuitable, and the same applies to very

produced by the other kind of flower. Towards the end of the seventeenth century, Grew, an Englishman, indicated the probability of the anthers being the organs which furnished the means of fertilisation; and before its close, Camerarius, a German, carried out experiments, and demonstrated clearly the existence of the reproductive organs of plants. Unfortunately, he thought that all hermaphrodite flowers were self-fertilising. He seems to have been the first to suggest the possibility of plant-hybridisation. The first hybrid plant we have any distinct record of was raised by Thomas Fairchild, an English gardener, it being the result of the crossing of two species of *Dianthus*, and named Fairchild's Sweet William.

The science of hybridisation was first put on a proper footing by Kölreuter, who published a work on the subject in 1761. Before the century ended, Knight, after having experimented in rearing domestic animals, set about crossing fruit trees, Strawberries, Peas, &c., so as to find whether better kinds could not be got. Knight was a plant-physiologist of great note, and he propounded the doctrine that "no plant self-fertilises itself for a perpetuity of generations." At the beginning of the nineteenth century Knight was joined by Herbert in the work of producing garden plants, and during that century an immense amount of work, both scientific and economic, has been done. We need only mention the name of Darwin in this connection. He extended Knight's doctrine by adding, "that a cross with another individual is occasionally—perhaps at very long intervals—indispensable."

The earlier records, and indeed the great majority of the records, all along refer to garden hybrids, not to farm ones. This is explained by the fact that in gardening a far greater variety of plants is cultivated, and also by this, that a gardener's training is such as to be much more likely to lead to experimentation in crossing plants than a farmer's is. The gardener deals with plants alone; the farmer has his stock to consider as well. The hybridist should be prepared to carry out the most delicate operations; he should understand the fine details of pot culture; he should come to think of his plants as his pets, and be led to tend them by something after the nature of that poetic instinct which tells us "how akin they are to human things." He is fortunate if he be possessed of a disciplined imagination, a scientific spirit, and a refined touch. Above all, he must be endowed with the maximum of patience.

in purely economic lines the list of workers is already a large one, and it is being added to at the present time at an almost alarming rate

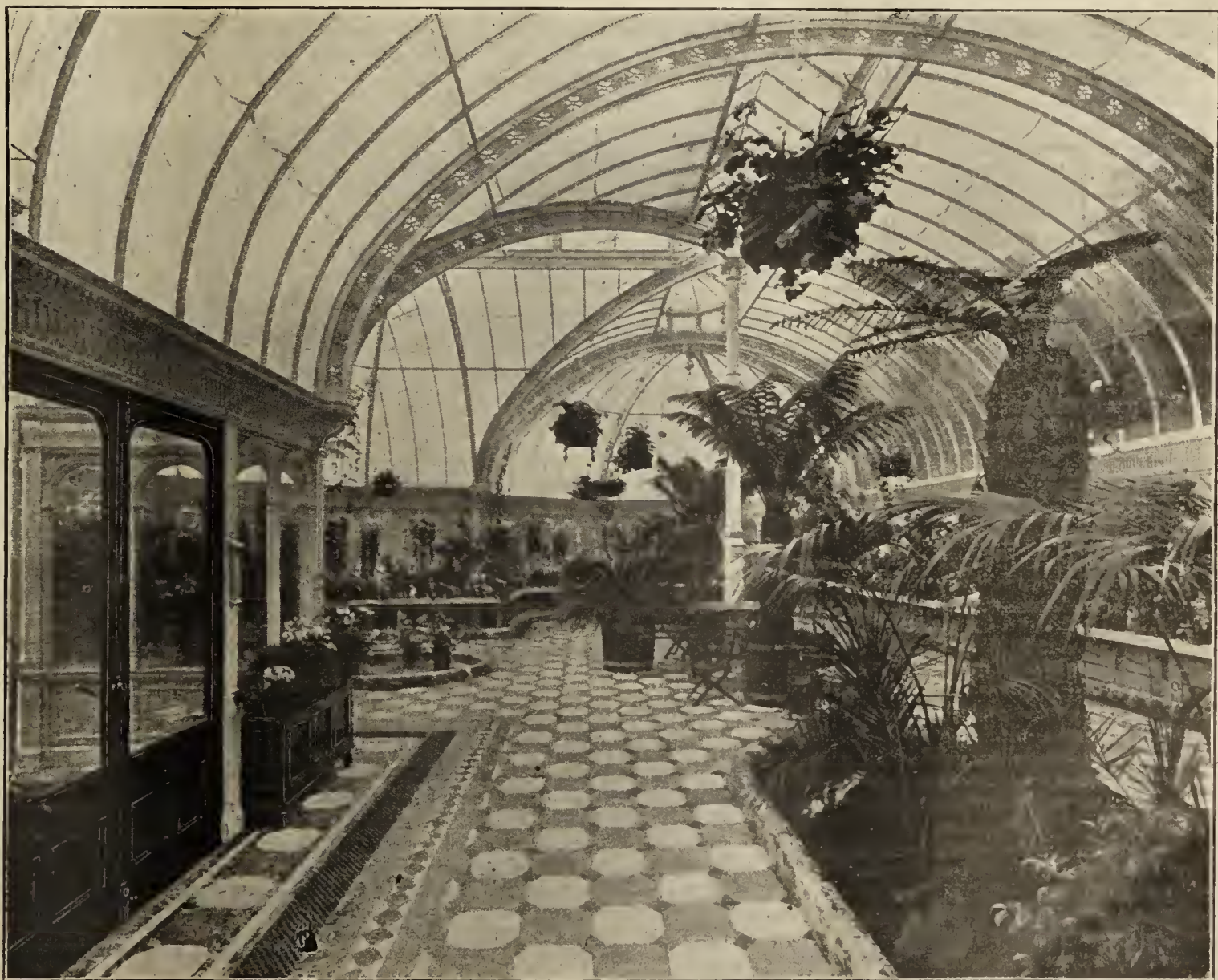
A fortnight ago an International Conference on Plant Breeding was held in New York, at which fifty papers, by forty-eight authors, were submitted. England was represented by three authors, Scotland by one, Ireland one, Canada two, West Indies one, France one, Austria one, and Holland one, all the rest being from the United States. The U.S. Department of Agriculture and the State experiment stations were strongly represented. While many circumstances tell against the proportion of "foreigners" being larger, it is evident that the American has now come to regard the breeding of plants as a matter of the very highest consequence. One is led to think of the princely endowments of most of

the experimental stations connected with the American universities, and one naturally associates the progress made in them with the salaries given to the workers. It is neither the place, nor the salary, but the man we must look to after all. If improvement of crops is called for in a new country, how much greater is the need in an old country?

By way of illustrating what is being done in the United States, I may mention that during a recent tour there I visited one of the most noted of American workers, Professor Willet Hays, the head of the agricultural experiment station of the University of Minnesota. He is well known as the raiser of Wheats which are expected to double the harvest in Minnesota and neighbouring States. Another famous hybridist visited was Mr. Luther Burbank of Santa Rosa, California. His work is chiefly among fruits and flowers, but he is well known as the raiser of the Burbank Potato. One of his most interesting and useful "creations" was the "Plumcot," a cross between the Plum and the Apricot.

Passing to personal experiences, it may not be inappropriate to mention that I worked for a very considerable number of years accumulating a mass of material of scientific interest, which, for want of time, has not been elaborated. The varieties of plants produced were of but little commercial use. On being appointed to the lectureship in agriculture in St. Andrew's University, I turned to farm plants, and what is now to be said of them is virtually the outcome of two summers of experimentation at St. Andrews. It is well to state that the work has been hitherto carried on at the lecturer's own initiative and expense. In St. Andrew's University it is no uncommon thing to find enthusiasm leading to a little self-sacrifice. Endowment is a secondary consideration in a place where the teachers feel themselves to be, if not the heirs of all the ages, of, at any rate, 500 years of educational progress.

The methods of work are simple enough. A few plants of each kind only are required. These are allowed to flower, protected if necessary, and operated on in the usual way. I consider a glazed case of my own invention to be the best means of protection. There are two classes of flowers to be dealt with, those which are fertilised by insect agency, and those which are self-fertilised. Amongst the former are classed Turnips, Cabbages, and the like, and among the latter the cereals and grasses. One of the most interesting points in connection with



Interior, Philiphaugh Conservatory. See page 464.

Johnston & Co., Ltd.

the Turnip family is this, that the flower of the Swede is virtually identical with that of the Cabbage and its cultivated varieties; while the flower of the yellow or common Turnip is quite different from both. It is comparatively easy to manipulate Turnip flowers so as to secure crosses. It must be remembered that although flying insects are excluded, the plants often set seed by self-fertilisation. In this connection, however, one should notice that the flowers of Crucifers are commonly infested with small beetles, which creep about in quest of pollen, and it is possible that now and again they may carry it from one flower to another. In the plots one can see at present growing examples of crossed Swedes and Turnips, and reciprocal crosses between these. The pollen parent seems in many cases to be prepotent. Intermediate vegetative characters are often displayed.

An elaborate series of crosses in the genus *Brassica* has been gone into, and the crossing together of the cultivated derivatives of the original Cabbage, viz., Brussels Sprouts, Broccoli, &c., has yielded very interesting results. Very evident intermediates have been got between Brussels Sprouts as the seed parent and Curled Kale, Broccoli, and Savoy as the respective pollen parents; and so on, in some sixteen combinations. It is hoped that some of the new vegetables may prove useful. Efforts to cross Swedes and Turnips with the above seem to have resulted in total failures. An unusually interesting hybrid has been obtained from pollination of Curled Kale by Charlock. There are four plants, and they all bear marked resemblance to Charlock. They are, however, of taller growth, the tallest flower shoots being over 5ft. Although they flower profusely, they refuse to bear seed. An examination of the pollen shows that it is extremely inferior.

The crossing of Potatoes is rendered difficult chiefly through the want of normal flowers. Some varieties do not flower at all; others more or less, but bear no fruit; while only a few bear fruit freely. In a field of British Queen, covered with bloom, fruits were found only where crossing had been carried out. The pollen is often very deficient. A variety from New Zealand has proved to be useful, being successful both as a seed and pollen parent. The crossed seed was kept until spring, and was then sown in slight heat. The young plants were grown for a time in pots, and then planted out. Most of the seedlings have done well. Sown on March 12, and planted out on June 6, the first flower opened on July 19. The shaws (haulms) have in many cases been very strong, often over 3ft in length, and in one instance no less than 5ft. The few examples yet lifted show a very fair crop, over 5lb to one plant being noted. The tubers are often well up to average size, some illustrated being

4in to 5in in length. A remarkable result is noted when the tubers of one parent are red and the other white. Many of the tubers of the cross are purple and white, but few red. The colour of the flowers was found to correspond almost invariably in a general way with the colours of the tubers—purple with purple, white with white.—D. J. WILSON, St. Andrew's University, at the opening of the West of Scotland Agricultural College, October, 1902.

The Priory, Leamington, Warwickshire.

TRAVELLING from Leamington to Warwick on the Great Western Railway, the outlook on the left, just before reaching Warwick Station, is one of considerable beauty, as a glimpse can be obtained of the ancient town of the "King Maker," with its picturesque "gates" and the commanding tower of St. Mary's Church. More stately and imposing, however, than all else around, are the grand old towers of the Castle, which rise from their once watery base above the tree tops on either side—trees which, though of giant stature, are but as babies in point of age when compared with the grey walls they help to adorn.

Just beyond Warwick Station, on the crest of a hill, a mass of tall trees again arrests attention, and the casual observer would perhaps scarcely notice, through the slight openings between them, evidences of an old and extensive building; yet in that secluded spot, shut off from the town on the opposite side by a high wall, is the "Priory," probably as old as almost any part of Warwick save the Castle. The mansion, gardens, and grounds which surround it are extensive, and yet half the inhabitants of the town have not the slightest idea of the size of the domain, because of the encircling belt of trees. The principal entrance is through massive iron gates at the top of Northgate Street; from that point the drive sweeps onward with an easy curve to a courtyard, and thence to the stately entrance to the mansion, the inside of which it is not within my province to describe; but one could not help noticing the quaint sundial over the door, and the telling motto beneath, which reads thus:

I mark the moments,
Both for good and ill.

The Priory has only been in the occupation of R. Emmet, Esq., about eighteen months, and as during that time the glass houses have undergone extensive repairs, very little room could be found for bedding plants. The flower garden has therefore



Mackenzie and Menzies, Ltd.

Exterior, Farmleigh Conservatory. See note on page 464.



Mackenzie and Moncur, Ltd.

Interior, Farmleigh Conservatory. See note on page 464.

been planted principally with annuals, and in the geometrical beds on grass, Stocks have been exclusively employed, and right well have they answered the purpose for which they were intended by giving hosts of fine spikes of showy and sweetly scented flowers throughout the season; a fine white variety, named "Christmas Tree," has been especially good. Near by are grand beds of Rhododendrons and Azaleas, which must have been brilliant pictures at their flowering time. Coniferæ seem here to have found a congenial home, for splendid specimens may be seen on every hand.

And now I come to one of the great features of the gardens and grounds which must impress all visitors, especially those who delight in styles of olden times—viz., the Yew hedges. I have travelled a bit, and have seen many of the best of British gardens, but nowhere have I previously encountered such an imposing array of beautifully kept Yew hedges.

Here there are gardens enclosed with Yew hedges, gardens divided with such hedges, walks bounded with Yew hedges, and walls faced with hedges; Yew hedges, in fact, everywhere. They certainly create a feature which carries us back to the gardens of olden days; but, oh! the work they give. For six long months of the year one man and his helper are constantly employed in clipping them into their rigid shape. What a sum total of useful labour this would represent if spent in more productive gardening. But away with such thoughts, for the labour is well spent in preserving the distinctive character of such old-world gardens. As in many other ancient gardens, the vegetable quarters here are not arranged in the form of one large kitchen garden, but vegetables are grown in several enclosures. So much the worse for the gardener, because of the extra labour it entails.

In order to keep pace with the demand, the utmost has to be made of every inch of space, and therefore as soon as one crop is cleared another takes its place. It is not necessary to enumerate the many species or number of vegetables grown, they are similar to those cultivated in other large establishments in order to keep up a continuous supply throughout the year. A special note must, however, be made of grand breadths of Sutton's Matchless Brussels Sprouts, and Major Clarke's Red Celery. The former is the best example of "Sprout" culture I have seen this season, the huge stalks, three or four feet in length, being studded with hard round knobs, which are the true test of good culture. Early planting,

firm soil, and allowing plenty of space for each plant, are the details which have brought success.

A special feature is also made of herbs and vegetables for making salads. Among the many varieties of Peas grown Sutton's Windsor Castle, has proved the most prolific and satisfactory in every way, the quality being of the highest order.

The fruit crop in the open air—as in many other gardens—has been almost a failure, but in a cool Peach house, healthy trees were carrying fine crops which are greatly valued. The other glass houses are devoted principally to the production of plants and cut flowers, for which there is an increasing demand. A grand batch of Begonia Gloire de Lorraine will undoubtedly be of special value during the autumn and winter months; there must have been fully 200 plants in 5in, 6in and 7in pots, each one being perfectly clean, and a model of good culture. Late struck cuttings also supply hosts of "baby" plants in thumb pots just suitable for carrying out the lighter parts of dinner-table decoration. Palms, large and small, Ferns, Chrysanthemums, Carnations, Begonias, Gloxinias, and highly-coloured Dracænas and Crotons, are largely grown in pots of the right size for decorative purposes.

A good collection of Orchids is also being got together, and already the collection contains several very fine specimens of Cymbidiums, Cattleyas, and Cypripediums, and the Odontoglossums are a remarkably clean healthy lot. The favourite Tomatoes are Dobbie's Champion and Perfection, a good batch is grown in pots, in the open air, ready for placing under glass in October to supply fruits during the autumn months. Many of the best modern varieties of Strawberries are grown, and on September 21st I noticed among them that fine late variety, St. Antoine, carrying really good ripe fruits. I can confidently recommend this variety for autumn fruiting.

Mr. H. Sinclair, the energetic head gardener, who took charge of the above gardens a little more than a year ago, is a young man, who should make his mark in the gardening world, if energy and close attention to duty will achieve distinction. He is an old and constant reader of the *Journal of Horticulture*, and his good training in such well-known gardens as Eaton Hall and Barford Hill have well fitted him for his present post, where his employers take the greatest interest in all matters connected with the gardens around their English home—a home in the heart of the Midlands, yet ancient and secluded as a forest in the days of Robin Hood.—WANDERER.

Societies.

R.H.S. Scientific Committee, Nov. 10th.

Present: Dr. M. T. Masters, F.R.S. (in the chair); Messrs. Odell, Veitch, Saunders, Worsdell, Massee, Chittenden, Bowles, Holmes, and Baker; Dr. M. C. Cooke; Professor Boulger; Revs. W. Wilks and G. Henslow, Hon. Sec.

Scientific investigations at Wisley.—In reply to Dr. Masters' request for suggestions, Mr. F. J. Baker wrote to say that in his opinion the botanical director should have a sound practical knowledge of general science (including biology, chemistry, and physics), and a sufficiently good knowledge of gardening to enable him to apply facts to such intricate problems as arise in connection with horticulture. He should be able to distinguish between the requirements of artistic, scientific, and economic gardening. Mr. Baker also made suggestions of a pecuniary nature. Dr. Rendle in his communication discusses the question of expense and necessary appliances for the Director, e.g., microscope, apparatus &c.

Potatoes and Millipedes.—Mr. Chittenden showed Potatoes badly attacked by these creatures. It was thought that an excess of manure and a deficiency of lime favoured their presence.

Croci new to cultivation.—Mr. Bowles exhibited some growing plants of interesting species as follows:—*C. Cambessedesi*, Gay, introduced to cultivation by Mr. G. Maw, but subsequently lost. It is now re-introduced from Port Mahon in Minorca. It only occurs in Majorca and Minorca. *C. caspius*, Tisch and Meyer. This species is new to cultivation. It was collected in Russian Talych at an elevation of 1,000ft. *C. c. var. lilacinus* has flowers of a pale rosy lilac colour; the throat, as of the type, is of a bright yellow colour. A unanimous vote of thanks, proposed by Mr. Veitch and seconded by Mr. Holmes, was given to Mr. Bowles with Botanical Certificates for the new species exhibited.

Pears malformed.—Some curious specimens were received from Mr. Goodacre, Elvaston. Professor Henslow examined them and reports as follows:—The stalk of the fruit had made a preliminary effort to form a Pear, but only on one side of it; thereby producing a curved, somewhat pointed, wen-like excrescence, due to the hypertrophy of the cortical tissues. This caused a curvature in the stalk; from out of this depression the stalk continues its growth, finally terminating in an elongated Pear. The core or carpels, when present, for they were in some instances suppressed, were situated very close to the terminal depression which contained the calyx and other remnants of the flower.

Fraxinella capsules.—Dr. Masters showed specimens, illustrating the peculiar way the endocarp separates from the outer wall of each follicle. Then, by twisting, it jerks the seeds out. It was again remarked that the seeds must not be allowed to dry lest they fail to germinate.

Devizes (Wilts), November 3rd.

This is annually held in connection with a very deserving institution, the Devizes Benevolent Society, and one half of the Corn Exchange was filled with groups of Chrysanthemums and fine blooms, and the other half with gaily-decorated stalls, at which ladies sold various articles in aid of the Society. But the Chrysanthemum show is always a great attraction. It was admirably arranged by Mr. W. King, of the Castle Gardens.

Two bold groups were staged in the centre, the first prize for one arranged in a circle with foliated plants went to Mr. H. Clack, gardener to G. E. Colston, Esq., M.P., Roundhay Park, Devizes. Miss Niven, the Grange, Marden, took the second prize. A class for twenty-four blooms of incurved and twenty-four of Japs, shown in combination, is always a very interesting one, and the first prize fell to the lot of Mr. W. Higgs, gardener to J. B. Hankey Esq., Fetcham Park, Leatherhead, with, as might be expected, excellent blooms throughout. The King is a promising new variety of a rich lake tint. Two other prizes were awarded. Mr. Drake, of Cardiff, who had entered for this class, had a serious accident to his blooms through careless handling, and could not exhibit. He had some excellent incurved varieties. With twenty-four blooms of Japs, Mr. F. S. Vallis, Bromham, Chippenham, won the Mayor's handsome silver cup. He had finely-developed examples of Sensation, F. S. Vallis, E. Molyneux (in excellent character), Brightness (bright rose, one of Mr. H. Silsbury's raising, and very fine), Mildred Ware, Bessie Godfrey, Monsieur Viger, S. T. Wright, W. R. Church, Valerie Greenham, Mdm. Herrewége, Mrs. Bryant, Nellie Pockett, Henry Stowe, Chas. Longley, &c. Second, Mr. C. J. Salter, gardener to Mrs. Haywood, Woodhatch, Reigate, who had fine blooms of Mrs. J. Lewis, E. Bettesworth, W. R. Church (very fine), W. Duckham, Mrs. G. Mileham, Mildred Ware, W. A. Etherington, Chas. Penford, Mary Inglis, General Hutton, F. S. Vallis, &c. Mr. F. Cooke, gardener to T. E. Taylor, Esq., was third with twelve blooms of Japanese incurved. Mr. F. Bible, The Gardens, Draycott, Chippenham, was first. Chief among his blooms were Mrs. Mileham, Captain P. Scott, Godfrey's Masterpiece, Miss Mileham, Mdm. P. Radaelli,

Florence Molyneux, &c. Second, Mr. F. S. Vallis, with twelve blooms of Japs, six white and six yellow. Mr. H. Wright, Beckett Gardens, Shriyvenham, was first; he had six blooms each of F. S. Vallis and Miss A. Byron. Mr. Vallis came second with Bessie Godfrey, F. S. Vallis, and two whites, Mrs. J. Lewis and Mdm. Herrewége. Mr. H. Clack was third. Mr. H. Clack was placed first with twelve Japanese, open only to exhibitors in Wilts. The best epergne of Chrysanthemums was staged by Mrs. Lucas, and Miss Vallis was second; but Miss Vallis came first with a charming basket of autumn foliage, Mr. Lucas taking the second prize.

Cheltenham (Gloucestershire), November 4th.

There is a happy combination of horticulture and agriculture at Cheltenham, and on this occasion the spacious Winter Garden was seen to be filled with very much of the produce of the garden and a great deal from the farm. The brilliant Chrysanthemums predominated. There were very fine and effective circular groups, somewhat too formal and too much packed; but yet effective in the case of the large groups. Mr. J. Horlick (J. Maddocks, gardener) 1st, for largest Mr. H. O. Lord (T. May, gardener) was a good second. In another class for a group Mr. Horlick was again awarded a first prize. There was still a third group, in which Mr. Leighton, an amateur, took the first prize, staging remarkably good stuff.

Specimen plants were in several classes, but they were not so good generally as we have been in the habit of seeing them at Cheltenham. The Japs were decidedly the best. An excellent specimen of W. R. Church was in the first-prize collection of six plants.

The greatest interest centred in the cut bloom classes. The best eighteen incurved came from the Misses Davies (H. J. Driver, gardener), whose blooms, generally well-finished, comprised M. A. Haggas, Mdm. Ferlat, Princess of Wales, Hanwell Glory, Fred Palmer, C. H. Curtis, Violet Tomlin, Major Bonaffon, &c. Mr. H. O. Lord was a good second. In the class for twelve blooms, Mr. E. Hadland (E. C. Young, gardener) was well in first. He had, in good condition, Topaze Orientale, Pearl Palace, Miss A. Hills, Mrs. Crooks, C. H. Curtis, Mdm. Ferlat, &c. Major Showell (J. Mallow, gardener) was second.

Japanese blooms were finely shown by Mr. Horlick, whose leading varieties were J. R. Upton, Kimberley, Mrs. Mease, Mafeking Hero, Miss E. Fulton, Mrs. G. Mileham, Duchess of Sutherland, W. R. Church, J. T. Thorneycroft, Mdm. P. Radaelli, Le Grand Dragon, &c. Second, Mrs. Swinburne (Mr. Martin, gardener), who also had finely-developed blooms. In the class for twelve Japs Sir Hubert Parry, Bart. (Mr. Berry, gardener) was placed first; having, in fine form, Lord Salisbury, Mrs. Barkley, J. R. Upton, Chas. Longley, Miss L. Mountford, Kimberley, Eva Knowles, &c. Major Showell was a close second. There was a class for six varieties also.

A new class for twelve vases of large specimen blooms, three blooms of one variety, to be shown in a vase, was instituted for the first time, and brought an excellent competition. Mr. H. O. Lord was first, and Mr. J. Horlick was second.

Plants were represented by some glorious examples of Begonia Gloire de Lorraine, by Cyclamens, Primula sinensis, Violas, Salvia splendens, &c., all very creditable.

Fruit was represented by fairly good black and white Grapes; culinary and dessert Apples, owing to the season and their scarcity, fell below the usual mark; and of Pears there were none, excepting some big Pitmaston Duchess and Belle d'Angeline, shown for weight. A few Pears were among the collections of hardy fruits, which consisted mainly of Apples.

Vegetables were numerous shown, and some good collections were staged in competition for the special prizes offered by Messrs. Sutton and Sons and Yates and Son.

Much that interested the agricultural interest were also good and of varied character. The arrangements made by Mr. Sharpe, the secretary, were, as usual, excellent, and satisfactory all round.

Ipswich and East of England Horticultural.

This Society held its annual Chrysanthemum show in the Public Hall, Ipswich, on November 10 and 11. Generally speaking, the display was of a very satisfactory character, and competition was keen throughout. Show boards have been all but abolished at this exhibition, only one or two classes being reserved for blooms shown in this manner.

CUT FLOWERS: CHRYSANTHEMUMS.—The principal class for Japanese is that for six vases, five blooms of each variety. This brought only one competitor, Mr. T. Whittel, gardener to Luther Holden, Esq., Rushmere, who was awarded first prize for nice set, comprising W. R. Church, Mrs. G. Mileham (good), Matthew Smith, Mrs. Mease, T. Carrington, and Mrs. Greenfield. For eighteen Japs, in six vases, competition was keen. Mr. W. Messenger, gardener to C. H. Berners, Esq., Wolverstone, secured the premier award with a highly coloured exhibit

which comprised J. R. Upton, W. R. Church, Mrs. E. Thirkell, Mrs. G. W. Palmer, Mrs. E. Hummel, Le Grand Dragon, M. Louis Remy, Miss Elsie Fulton, Mrs. R. Darby, Lily Mountford, Vivian Morel, F. W. Vallis, Mrs. Barkes, Bessie Godfrey, Chas. Longley, Miss E. Pilkington, Sensation, and G. Penford. Mr. A. Creek, gardener to Sir C. Domville, Bart., The Chantry, Ipswich, was not far behind, his best flowers being Miss Lucy Evans, Miss A. Byron, Mrs. E. Thirkell, and Mrs. Mease. Both exhibits were deficient in white varieties. Mr. J. Clark, gardener to Mrs. Spooner, Rushmere, was third.

Mr. A. Haynes, gardener to Col. Browning, C.B., Brantham Court, Manningtree, staged an excellent stand of twelve Japs, and secured the premier award, the varieties being Gen. Hutton, Lord Salisbury, Princess de Brancovan, W. R. Church, Mrs. Barkley, Lord Ludlow, Mr. T. Carrington, Edith Tabor, Miss Alice Byron, J. R. Upton, Mdme. Carnot, and Godfrey's King. Mr. A. Creek was second, having nice blooms of Mrs. Mease, Calvat's Sun, Gen. Hutton, and Miss Lucy Evans. For six white Japs in a vase, Mr. H. H. Godbold, Ipswich, was first with Mdme. Carnot; Mr. Haynes second with Mdme. Phillippe Rivoire. In the corresponding class for any other colour, Mr. Godbold was again successful with a lovely set of Bessie Godfrey; Mr. Creek second with Mrs. Mease.

A pretty show was made by the class for six large blooms, arranged in a vase with autumn foliage. Mr. W. Messenger was placed first, having fronds of Osmunda, Maple leaves, and other coloured foliage. This vase contained the premier bloom in the open classes, Bessie Godfrey. Mr. Godbold was second.

In the amateur classes competition was remarkably keen, and some good flowers were staged. Mention must be made of the four vases of Japs, three of each, staged by Mr. Haynes, which consisted of Mrs. J. Lewis (enormous flowers, one being selected as the premier bloom in the amateur classes), Mrs. E. Thirkell, W. R. Church, and Mrs. Barkley. Cut flowers of decorative Chrysanthemums in vases were largely staged, but were hardly up to the average in quality.

PLANTS.—For a circular group of miscellaneous plants, Mr. A. Creek easily outdistanced all other competitors. The centre was composed of tall Grevilleas, large-flowered Chrysanthemums, and fine specimen Crotons, while the circumference consisted of groups of Calanthe Veitchi, C. vestita, Begonia Gloire de Lorraine, and Carnation Mrs. Lawson. Mr. R. C. Notcutt, Broughton Road Nursery, Ipswich, was second with an arrangement of Palms, Chrysanthemums, Ericas, and Bouvardias. Classes for Primulas, Poinsettias, Begonia Gloire de Lorraine, &c., were exceedingly well filled. Table decorations are a new departure, and seemed to be amply justified. In the open class, Mrs. Messenger was placed first, with a charming arrangement of Begonia Turnford Hall and Princess of Wales Violets, with Asparagus decumbens and other foliage. Mrs. Shipman, Norfolk house, Woodbridge, second; using Begonia Gloire de Lorraine and Lily of the Valley, in conjunction with Smilax and Maidenhair. The third prize went to Mr. A. Andrews, High House Gardens, Campsea Ashe, who used Oncidium varicosum, O. Rogersi, and Cypripedium.

VIOLETS.—In competition for the special prizes offered by the Rev. A. Foster-Melliar, and likewise for those offered by the Society, many grand exhibits were staged; indeed, it is doubtful whether the display could be beaten or even equalled at any other show in the country. For six bunches, in three varieties, arranged with own foliage, Mr. Andrews was placed first with Marie Louise, De Parme, and Princess of Wales. Mr. A. Creek was a close second with Marie Louise, De Parme, and Comte de Brazza. For a bunch of any single, Mrs. Godfrey Hempson was easily first with some grand flowers of La France; Miss G. Foster-Melliar second with Princess of Wales. For any double variety, Mr. Andrews scored with very fine Marie Louise, Mr. Whittel being second with the same variety. Mr. Whittel was first for a spray and buttonhole of Violets, with Marie Louise arranged with Maidenhair Fern; Mr. O. G. Orpen, West Bergholt, second with a single variety; Mr. Creek third with Comte de Brazza and Mrs. Astor, arranged with own foliage and Asparagus.

FRUIT.—With the exception of Pears (of which only eight dishes were staged) there was a good show. For Alicante Grapes Mr. W. Messenger was first with large, well-coloured bunches. Mr. E. Creek, gardener to A. Fraser, Esq., Westerfield House, Ipswich, was second with nice shaped bunches, rather small in berry; third, Mr. A. Andrews. Any other black Grape, first, Mr. T. King, with Mrs. Pince; second, Mr. W. Messenger, with Gros Colman; third, Mr. Andrews, with Lady Downe's. For Muscats, Mr. Andrews scored with well-finished bunches, Mr. A. Creek second, and Mr. E. Creek third. Any other white variety, Mr. W. Messenger first, with Lady Hutt (only entry). Apples, both dessert and cooking varieties, were well represented considering the adverse season. The principal prize-winners were Mr. O. G. Orpen, Mr. S. W. Sweet, Mr. John Wolton, and Mr. Andrews. Vegetables, as usual, were of excellent quality, but, unfortunately, the small size of the hall causes them to be relegated to a draughty corridor, where inspection is anything but pleasant.—E. C.

Winchester (Hants), November 11th.

In the Guildhall the annual show was held, and was a success, in spite of the fact that there were fewer entries in the cut bloom classes. Nowhere is an autumn show better managed than this. The hall seems to lend itself to a display of that character with the long lines of tables running the length of the hall, flanked on each side with the Chrysanthemum groups and specimen plants. A room was set apart mainly for the classes devoted to ladies in the gentle art of arranging flowers for various purposes. Fruit and vegetables were a feature, especially the Grapes, which were numerous and good. Plants are usually seen here in good condition.

For a group of Chrysanthemums (8ft by 7ft), quality of blooms to be the leading feature, substantial prizes were offered, and brought three good exhibits, Mr. H. G. Pitteman, gardener to Mrs. Curtis, Oakwood, Otterbourne, being first. He had dwarf plants, well furnished with high quality blooms, many of them belonging to the incurved section. Mr. Pearce, gardener to H. E. Johnson, Esq., Northgate Place, Winchester, was a good second. Mr. R. Stone, gardener to the Ven. Archdeacon Haigh, The Close, Winchester, third.

For nine plants suitable for conservatory decoration, Mr. G. Adams, gardener to Col. Dickins, Edgehill, Winchester, was first. Mr. H. Gigg, gardener to the Rev. D. M. Moorson, Holyrood, Winchester, second. The same exhibitors occupied a similar position in the class for nine plants, white or yellow.

Miscellaneous plants arranged for effect were an interesting feature. Mr. E. Long, gardener to F. C. Burch, Esq., Winchester, with a grand batch of Orchids, suitable greenery, and science of arrangement, easily secured the first prize. Primulas, Cyclamens, table plants, and Lorraine Begonias were well represented.

Cut blooms were a trifle fewer in number, but the quality was quite up to the average. In the leading class, for forty-eight Japs and incurveds, there was but one entry, that from Mr. Neville, gardener to F. W. Flight, Esq., Cornstiles, Twyford, Winchester. The quality usually obtained by this exhibitor was well maintained on this occasion. For thirty-six Japs in twenty-four vars., Mr. J. Wasley, gardener to J. B. Taylor, Esq., Sheffield Manor, Basingstoke, was easily first with high class blooms, correctly staged. Especially noticeable were Mrs. H. Emmerton, Madame Carnot, J. C. Neville, Mrs. G. Lawrence, Edwin Molyneux, Matthew Smith, C. Penfold, Mrs. J. Cleeve, Mary Perkins, Queen Alexandra, Sensation, Mrs. R. Darby, W. R. Church, Mrs. E. Hummel, Elsie Fulton, Kimberley, and J. R. Upton. Mr. Neville was a good second. In a class for twelve Japs Mr. Dawes, of Hambledon, was easily first with high class blooms. Mr. R. J. Ransom, Elm Lodge, Bishop Sutton, second. Mr. A. J. Marsh, Morton House, Winchester, was distinctly ahead for twelve Japanese in not less than eight varieties, with richly coloured blossoms of F. S. Vallis, Mafeking Hero, Sensation, M. Louis Remy, W. R. Church, and Mildred Ware. Mr. F. Smith, The Close, Winchester, second.

Japanese, staged in vases, were, as they usually are, an attraction. For nine varieties, three blooms of each, Mr. Wasley won the premier award; Mr. Neville second. For six, under similar conditions, Mr. A. J. Marsh won, and Mr. G. Adams second. Mr. F. Smith third. Amateurs staged exceedingly fine blooms. Mr. E. Jarrow, 38, North Walls, Winchester, was distinctly ahead with superb blooms of leading varieties.

Fruit was excellent, especially the Grapes. For three bunches, distinct varieties, Mr. W. Mitchell, gardener to J. Willis Fleming, Esq., Chilworth Manor, Romsey, was first with Mrs. Pince in superb condition, Muscat of Alexandria, and Alicante. Mr. Wasley second. Mr. J. Hughes, Twyford Lodge, third. Mr. Wasley, with exceedingly fine examples of Muscat of Alexandria won first place for two bunches any colour. Mr. Mitchell, with Mrs. Pince (barely finished), second. Apples and Pears were few in number, but good in point of quality.

Vegetables were numerous and good. In the classes for six dishes Mr. Ellwood, gardener to W. H. Myers, Esq., M.P., Swanmore House, Bishop's Waltham, secured the premier award in both Messrs. Sutton's and Toogood's classes with produce difficult to improve upon. Mr. Best, gardener to F. R. Leyland, Esq., The Vyne, Basingstoke, second.

The society's gold medal was awarded to Messrs. E. Hillier and Son, Winchester, for a grand display of Apples. Mr. E. Ladhams had a grand and surprising show of Gaillardias, herbaceous Lobelias (newer types), &c. Mr. Neville staged six dozen blooms of incurved Chrysanthemums of leading sorts, all in the pink of condition. To these the N.C.S. certificate of merit was awarded. Messrs. Toogood and Sons had a huge exhibit of Potatoes, Onions, &c.

Liverpool, November 11th and 12th.

For something like twenty-two years the handsome St. George's Hall has been available for the Chrysanthemum and Fruit Show; but owing to the hall having been previously be-poken, the Drill Hall, Botanic Road, was requisitioned. As

to the financial part of the business, one cannot give a glowing account: still, all who attended evidently came away with the pleasure of knowing that they had seen a good exhibition.

In cut blooms Liverpool has always been in the forefront, and with the redoubtable champion, Mr. J. Heaton, leaving the neighbourhood, excitement ran high as to who would secure the association's grand challenge cup, with the money prize of ten guineas, for twenty-four Japanese and same number of incurveds, distinct. Six competed, and never have finer blooms been staged. The winner was Mr. E. Ellis, Riverview, Heswall. The following were some of his varieties: Mrs. F. S. Vallis, Duchess of Sutherland, Mafeking Hero, Sensation, Elsie Fulton, Godfrey's Pride, Geo. Lawrence, Mrs. E. Hummel, General Hutton, Nellie Pockett, W. R. Church, Mermaid, Sir H. Kitchen, and Bessie Godfrey. The incurveds were of the well-known kinds. The second prize went to Mr. T. Young, gardener to T. G. Williamson, Esq., Otterspool House, who had Mildred Ware amongst others. Mr. G. Haigh, gardener to Sir W. H. Tate, Bart., Highfield, Woolton, was a splendid third; and Mr. P. Barber, gardener to Walter Holland, Esq., Carnatic Hall, fourth.

Six again competed for eighteen Japs, and here the same quality was noticeable. Mr. C. Jones, gardener to E. Evans, Esq., Spital Old Hall, led with grand blooms of Rev. W. Wilks, W. R. Church, Mrs. F. S. Vallis, Duchess of Sutherland, and Bessie Godfrey. The second went to Mr. P. Greene, gardener to Col. Gee, Greenhill, Allerton, and third to Mr. W. A. Webster, Paul's Moss, Whitechurch. For a similar number of incurveds Col. Gee had an easy victory, with capital flowers. Mr. H. Osborne, Holme Hey, Sefton Park, second. Five competed for twelve Japs, Mr. J. Clarke, Allerton Hall, winning with a very heavy stand. Mr. G. Osborne, Tue Brook House, second. The same exhibitors came in the order named for twelve incurveds. The pompon class was extra good. Mr. E. Wharton, Mavis Court, Sefton Park, won with Prince of Orange, Black Douglas, and Adilia Prisetta in perfection. Mr. Wharton had the best reflexed.

Five entered the lists for six vases of Japanese cut flowers, three blooms in each. Mr. J. Williams, Boscobel, led. Mr. J. Stoney, gardener to F. H. Gossage, Esq., Camp Hill, Woolton, had excellent vases of singles. The same exhibitor broke away from the usual Liverpool bronzy table decorations, but could not win with his pink flowers. Why? Few could tell. Mrs. Vlasto was awarded the prize for an arrangement which caused a certain amount of comment. The baskets, on the other hand, were distinctly improved, Mr. J. Williams having a handsomely arranged one of single and reflexed yellow Chrysanthemums interspersed with Crotons, Smilax, and Asparagus. Plants figured prominently. Mr. F. Keightley, Grassendale, had the best six staked, and Mr. Wharton a decidedly good six naturally grown.

Groups should form a greater attraction in arrangement. Mr. G. Osborne had the best. Mr. G. George, Whitefield House, Roby, second. The plant classes (miscellaneous) were again a great treat. Equally interesting was the brilliant display of Orchids, the victories resting with Messrs. Finch, Carling and Young. The Poinsettia class was perfection, and Bouvardias, too, were encouraging, Mr. T. Hitchman gaining both prizes. The Grape classes brought many entries and beautifully finished specimens. Mr. Skitt, Mr. Reid, Mr. J. Barker, and Mr. Wilson won prizes. Hardy fruit was much below the average.

The trade exhibits were handsome. Messrs. Dicksons, Ltd., Chester, staged a superior table of miscellaneous plants and fruit. Messrs. J. Cowan and Co. had an extra choice table of Orchids. Mr. Jno. Robson, Altrincham, an unusually fine group of winter flowering Carnations. Messrs. Sutton and Sons, an interesting exhibit of their new handsome Potato, "Discovery." Messrs. T. Davies and Co., Wavertree, had tempting Mushrooms, choice Lily of the Valley, and pot Conifers. Messrs. Rowlands and Sons, Childwall Nursery and West Derby, a fine stand of Begonia Gloire de Lorraine, interspersed with Asparagus Sprengeri. Mr. F. Roberts, West Derby, a large table of specimen Chrysanthemum blooms, Maidenhair Fern, and Begonias. Mr. George Rose, sundries. Mr. H. Middlehurst, a long table of the most approved varieties of Potatoes; and lastly, a stand of specialties from the Ichthemio Guano Co., Ipswich.

Parkstone (Dorset) November 11th and 12th.

This lovely place has often been called the Mentone of England, and few persons can visit it without being charmed by its scenery, with the sea to the south, and nestling amongst the Pine woods, Fern, and Heather-clad hills, it is a most appropriate spot for an autumn floral display. The eleventh annual show was, in every respect, a decided advance upon any of its predecessors. Cut blooms and groups of plants made a fine exhibition in themselves; and considering the naturally sandy soil of the neighbourhood, the quality of the vegetables was exceedingly good. Table decorations, epergnes, baskets, bouquets, and sprays of cut flowers

filled a large annexe to the main building, and tasteful arrangement characterised the whole of the competitive exhibits here, and added considerably to the beauty of a very successful show. Mr. T. K. Ingram, of the Parkstone Nurseries, put up a splendid lot of pink Carnations and Begonia Gloire de Lorraine, which drew admiration from all visitors.

CUT BLOOMS.—Twenty-four Japanese, not fewer than eighteen varieties. Mr. G. Hall, gardener to the Dowager Lady Ashburton, Melchett Court, was first with a grand lot, namely, F. S. Vallis (2), Mrs. Mease (2), Marquis V. Venosta (2), General Hutton (2), Mdme. P. Radaelli (2), W. R. Church (2), Mrs. G. Mileham, Bessie Godfrey, Mrs. J. Lewis, C. Penford, Mdme. Carnot, Mrs. T. Carrington, Lord Ludlow, Kimberley, Mrs. Hummel, Mrs. Barkley, and Mr. L. Remy. Second, Mr. W. Green, gardener to the Rev. W. M. Anderson; third, Mr. J. Page, gardener to Mrs. Laymon.

TWELVE JAPANESE, DISTINCT.—Mr. G. Hall secured first place again in this class, having fine examples of General Hutton, Marquis V. Venosta, Mrs. J. Lewis, F. S. Vallis, W. R. Church, Mdme. Carnot, Bessie Godfrey, Mrs. Mease, Mdme. P. Radaelli, Le Grand Dragon, Mrs. G. Mileham, and Mrs. Barkley. Second, Mr. W. Green; third, Mr. J. Page. Mr. J. Hobbs, gardener to Mrs. Barrow, was first for twelve Japanese, not fewer than eight varieties; second, Mr. J. Gould, gardener to Mr. L. Dawson Damer; third, Mr. G. W. Palmer, gardener to Mr. F. S. Field. Mr. G. Hall scored again for six Japanese, one variety, with very fine specimens of Mdme. P. Radaelli. In the class for nine cut Japanese on long stems, Mr. J. Hobbs was easily first.

TWELVE INCURVED, NOT FEWER THAN THREE SORTS.—Mr. G. Hall was first with fairly good blooms, as follows: Chas. Curtis (2), J. Agate (2), Mr. R. C. Kingston (2), Pearl Palace, Topaze Orientale, Ialine, Miss Haggas, Louise Giles, and F. Palmer; second, Mr. Gould; third, Mr. F. Cuff, gardener to Dr. Horace Smith.

GROUP OF CHRYSANTHEMUM PLANTS.—First, Mr. C. Barrett, gardener to Mr. Howard May; second, Mr. W. Palmer; third, Mr. S. Bodger. Mr. S. Horlock had first prize for a collection of eight varieties of vegetables; Miss A. E. Vivian for table decoration; Miss K. Light for epergne; Miss Penreath for basket of cut blooms; and Miss Palmer for sprays. The amateurs' and cottagers' classes were filled with high-class produce.

Birmingham, November 10th, 11th, and 12th.

A capital Chrysanthemum exhibition was this, the forty-third annual meeting, held in Bingley Hall. So closely following upon the recent great Chamberlain meeting, it taxed to the utmost the resources of Mr. J. Hughes (the secretary) and his energetic committee in their endeavour to complete the vast amount of staging and other arrangements by the day preceding the opening. It may safely be averred that never have such fine blooms, as a whole, been shown in Bingley Hall. Regarding fruit, however, notably Apples and Pears, there was a marked falling away. The display of vegetables has never, however, been excelled in quantity and quality. Mr. E. Beckett, gardener to Lord Aldenham, annexed the chief prizes for vegetables. Honorary exhibits, as usual, were numerous, and contributed greatly to the enhancement of the show. A unique feature was the collection of choice Cacti and other succulents grown by Mrs. J. G. Thomson, Handsworth. This novel exhibit proved a pleasing relief to the blaze of colour around. A Silver Medal was bestowed.

Another interesting and instructive exhibit was that by Mr. James Udale, horticultural instructor to the Worcestershire County Council, from the Experimental Gardens at Droitwich. The exhibit consisted of Onions, Parsnips, and Carrots, reared on different manures, in three sections, viz., stable manure, supplemented by chemicals, gave Onions which yielded at the rate of 26 tons 7cwt to the acre; in the case of mixed chemical manures, 9 tons 11cwt was the result; while with garden refuse it was 25 tons 8cwt per acre. A collection of dried fruits was also shown by Mr. Udale. Enchanting were the exceedingly beautiful floral designs and bouquets contributed by Messrs. Perkins and Sons, Coventry; and a similar display by Messrs. Gunn and Sons, of Acock's Green. Messrs. Perkins and Messrs. John Pope and Son were the respective winners of the prizes offered for hand bouquets. The groups of Chrysanthemums arranged for effect (open class) were considered the best ever exhibited in Birmingham. Mr. J. V. Macdonald, gardener to G. H. Kenrick, Esq., Edgbaston, gained first, £10, and a magnificent Silver Coronation Challenge Cup, given by George Cadbury, Esq. Second prize fell to Mr. W. Thomson, of Moseley. The third prize went to Mr. Alfred Cryer, gardener to J. A. Kenrick, Esq., Berrow Court, Edgbaston.

Collections and single plants of Chrysanthemums were very well exhibited, the principal prizetakers being Mr. Oliver Brasier, Mr. J. Maldrem (gardener to George Cadbury, Esq., Northfleet), Mr. A. Cryer, and Mr. R. Jones (gardener to C. A. Smith-Ryland, Esq., Burford Hall, near Warwick).

A fine feature was the vase class for cut blooms. A more beautiful and uniform arrangement would have been found by

adopting one row only, with also a few inches lowering of the wooden staging. The Committee will doubtless adopt some modification in future. In the class for eight vases of distinct Japs, five blooms of each, the first prize of £4 10s. fell to Mr. E. J. Brook (gardener to Colonel Becch, Coventry), with fine examples. He had F. S. Vallis, Mrs. G. Mileham, Bessie Godfrey, Mrs. Barkley, Miss Mildred Ware, Guy Hamilton, and Ethel Fitzroy. The second award fell to The Leamington Nurserymen and Florist Company; and third to Mr. J. H. Goodacre, Elvaston Castle Gardens.

In the class for six Japs, Mr. E. J. Brook was again to the fore with grand blooms of Mdme Carnot, F. S. Vallis, Guy Hamilton, W. R. Church, Mdme. Paoli Radaelli, and Mrs. Barkley. A close second was Mr. T. Pritchard, Umberslade Hall; and third, Mr. J. Rick, gardener to G. H. Hadfield, Esq., Ross. For four distinct Mr. W. Martin, Erdington, was placed first, and second Mr. S. Horton, Walsall. For two distinct, Mr. R. Barnes, Malvern, was to the fore; second, Mr. S. Horton. For pink Japs, Mr. C. Crooks, gardener to the Dowager Lady Hindlip, Droitwich, won with a fine exhibit of Mdme. P. Radaelli; second, Mr. S. Horton. For a crimson Jap, Mr. T. Pritchard scored with grand blooms of W. R. Church; second, Mr. C. Crooks with the same. For a white Jap, Mr. F. Biddle, gardener to A. Heaton, Esq., Handsworth, was first with Mdme. Gustave Henry; second, Mr. A. Taylor, Aeock's Green, with Nellie Pockett. For a yellow Jap, the first prize fell to Mr. C. Crooks with F. S. Vallis; second, Mr. R. Barnes, Malvern, with Mons. Louis Remy.

In the class for eighteen distinct incurveds the first prize was annexed by Mr. J. H. Goodacre with a board of grand blooms; second, Mr. W. L. Bastin, gardener to Sir A. Henderson, Bart., M.P.; third, Mr. C. Crooks. For twelve incurveds Mr. Crooks was to the fore; second, Mr. Bastin; and third, Mr. Manning, of Dudley. For eighteen Japs, Mr. E. J. Brooks led; Mr. C. Crooks, second; and the Leamington Nursery Company, third. For twelve Japanese incurved, Mr. R. Jones was first, Mr. W. Manning second, and Mr. H. Needham, Erdington, third. There were several other classes for local growers only.

Fruit was well represented, especially in the Grape classes. Mr. J. H. Goodacre had well-finished Muscat of Alexandria. His fine collection of fruit included Melons, Apples, and Pears. For a collection (40 square feet), the first prize of £5 and the Veitch Memorial Medal, and £5 offered by the Veitch Memorial Trustees, was annexed by him. The second prize of £6 was not awarded, but the third of £4 was given to Mr. J. Read, gardener at Bretby Park, for a collection of black and white Grapes and Apples only. The adjudication was subjected to considerable adverse comment.

In the class for six bunches of Grapes, three varieties, open to all, Mr. Goodacre again distinguished himself by securing the first prize; and Mr. J. Jones, gardener to Mrs. F. Need, Malvern, was placed second with very good fruit. For three black Grapes, Mr. R. Jones scored with compact bunches of Gros Colman; second, Mr. H. Folkes, gardener, Hemel Hempstead, with fine, well-finished bunches of Black Alicante. For three bunches of white Grapes, Mr. Goodacre led; second, Mr. J. Rick, with White Nice. Apples and Pears, considering the past season were fairly well shown, and a local grower, Mr. R. M. Mole, Edgbaston, was awarded a "Highly Commended" for a dish each of Durondeau and Pitmaston Duchess Pears, not for competition. There was keen competition in the vegetable classes for the substantial prizes offered by Messrs. Sutton and Sons, Messrs. Webb and Sons, Messrs. Simpson and Sons, Messrs. Richard Smith and Co., and Messrs. Thomson and Co.

In the numerous honorary exhibits, which so much enhanced the exhibition, mention may be made of the fine group of plants and cut flowers staged by Mr. J. Deacon, gardener to the Right Hon. Joseph Chamberlain, at Highbury, to which a Gold Medal was awarded.

Gold Medals were also awarded to Messrs. Webb and Sons, Messrs. John Waterer and Sons, Mr. John Basham, Messrs. Yates and Sons, Messrs. Richard Smith and Co., Messrs. Gumm and Sons, Messrs. Perkins and Sons, Messrs. Thomson and Co., King's Acre Nursery Co., Limited, and the Worcestershire County Council Experimental Gardens.

Silver Medals to Messrs. W. B. Child, C. H. Herbert, Mr. J. White, Messrs. Hewitt and Co., Messrs. Pope and Sons, The Vineries Co., Limited, Mr. J. Austin, Messrs. Thomson and Co., Mr. W. J. Godfrey, Messrs. J. G. Thompson, Messrs. Pewtress Bros., and Messrs. Clibran and Son. Bronze Medals to Mr. H. Deverill and W. Wells and Co., Limited. A Certificate of Merit went to Mr. Whitehouse.

It is noteworthy to observe that amongst the visitors on the opening day was a deputation of upwards of a score of the members of the Banbury Chrysanthemum Society, accompanied by the hon. sec., Mr. W. H. Walkley, the Mayor of Banbury. The deputation was cordially received by Mr. W. Butler (the president of the Birmingham Society) at the judges' luncheon in Bingley Hall. The visit would be well worthy of imitation by kindred societies.

Reading (Berkshire), November 11th.

The Reading Committee and the active secretary, Mr. W. L. Walker, can get together a very fine display of Chrysanthemums and other winter flowering plants, but for lack of a large enough hall the display has to be placed in the old and new Town Hall, which are divided by a corridor. In the old Town Hall were the groups of Chrysanthemums, the cut blooms, and the fruit; and in the new hall the various plants and cut blooms.

A challenge cup (given by Mr. Keyser) for a group fell to Mr. Barnes, gardener to A. F. Walter, Esq., Bearwood, Wokingham. Mr. Keyser (gardener, Mr. Galt) being second. Mr. Grant, gardener to Lady Lucas, Heatherwood, Ascot, was a good third. In the class for a floral decoration of not less than three distinct sections of Chrysanthemums arranged as a group, Mr. Exler, gardener to Lady Cook, East Thorp, Reading, was first, and Mr. Grant came second.

Cut Blooms.—The first prize for twenty-four incurveds was won by Mr. Bible, Draycott Park, Chippenham, having well-developed blooms and a good Mrs. Judson (an excellent white). He was the only exhibitor. In the twenty-four Japs Mr. Ashman, Billingbear Park, Wokingham, came first with excellent blooms of F. S. Vallis, Alfriston, (a variety said to surpass E. Molyneux), Dorothy Pywell, Mabel Morgan, Nellie Bean, W. R. Church, &c. Mr. Cole, gardener to Sir C. Russell, Bart., Swallowfield, came a good second. He had Miss E. Fulton, Mrs. J. C. Neville, F. P. Archibald, Mrs. Greenfield, Lord Ludlow, Sensation, Bessie Godfrey, &c. With twelve Japs, Mr. Barnes was first; Mr. Nicholls, Strathfieldsaye, second. With twelve incurved, Mr. Galt came first, and Mr. Simms, gardener to the Marquis of Downshire, Easthamstead Park, was second. Twelve specimen Japs with foliage saw Mr. Nicholls leading, and Mr. Hunt, gardener to R. Moss, Esq., Blackwater, second. The best six vases of specimen Japs, three in each, brought several competitors. Mr. Nicholls led with some fine blooms; Mr. Cole, Swallowfield, a close second; Mr. J. Gibson, gardener to R. W. Hudson, Esq., Danesfield, Marlow, well up as third. Twelve bunches of single varieties made a very pretty feature. Mr. W. B. Monck, Reading, came first, and Mr. Wilson second. For one variety, Mrs. G. Mileham and Mdme. P. Radaelli were the best kinds. C. H. Curtis and Ialane the best "one variety" incurveds.

For a group of cut blooms of Chrysanthemums with Ferns and foliage, Mr. Page, Dropmore, Maidenhead, was first, and Mr. Bright, Reading, second.

In the open classes for fruit, the prizewinners were Messrs. Coote (Marchfield, Chippenham), Nicholls, Cole, Brown (Englefield Green), Galt and Page for Grapes. For Apples and Pears Mr. Ashman (Billingbear), and F. B. Parfitt (Caversham).

Frome (Somerset), November 12th.

The annual show of the Frome Chrysanthemum Society was very creditable to the town and the management. The popular secretary is Mr. J. H. Vincent. Lord Ludlow, as president of the Society, was present to support Lady Ludlow in the opening ceremony.

The Frome Fruit and Flower Company secured extraordinary success in several sections of the show, no less than nine first prizes falling to their credit for Chrysanthemums alone. For twenty-four cut blooms their manager, Mr. Mines, staged Mafeking Hero, Henry Stowo (grand), Duke of York, M. J. Golder, Mrs. E. Hunnewell, Mdme. Herrewage, N. Pockett, Guy Hamilton, and J. R. Upton, all in splendid form, size, and colour. Mr. J. Pope, gardener to Chas. Bailey, Esq., Frome, was a good second, Calvat's Sun, Mr. J. Bryant, Godfrey's King, and Mdme. P. Radaelli being fine. Mr. Pitman, gardener to F. G. Lemon, Esq., third. Mr. Mines staged similar varieties in the class for twelve Japs, followed by Mr. Pitman, and Mr. Robertson, gardener to J. S. Doune, Esq., Castle Cary. Mr. Mines won for twelve Japanese incurveds; Messrs. Cray and Sons and Mr. Wilson (gardener to the Duke of Somerset) following. With J. R. Upton, Mr. Mines won for six of one colour. Staged in vases, the Chrysanthemums were most handsomely displayed. The Duke of Somerset's exhibit was a large one, composed of specimen blooms, arranged with beautiful taste. Messrs. Cray and Sons and Mr. Mines also added to this, the finest feature of the cut flower classes. Mr. Pope staged handsomely in the class for three vases, containing three blooms each, and Mr. Strugnell won with three vases of singles.

The decorated dinner table is always a good feature of the Frome shows, and Mrs. Woodland and Mrs. Hole were in their best form.

Groups of Chrysanthemums are said to be as fine as at any provincial show in the country, from both trade and private sources. Mr. Mines and Messrs. Cray were the contestants, the former winning. Mr. Pope represented the gardeners' section. Mr. Cutler, gardener to Mrs. Le Gros, was a good second. Except in Grapes, the fruit classes were not very well filled.

Mr. Pearce's honorary exhibit from Marston Gardens covered

a space nearly 400ft square, and was composed of Palms, Chrysanthemums, Crotons, Dracænas, Begonias, &c. The Crotons were intensely bright in colour, most diversified, and of a size well adapted for grouping purposes, and with skilful blending the whole form an imposing and dignified exhibit, receiving just praise from everyone.

Mr. Gandy, gardener to the Marquis of Bath, arranged an oval-shaped group, chiefly composed of flowering plants; and afforded an agreeable contrast to the wealth of foliage from Marston. Chrysanthemums, Palms, Poinsettias, Begonias, and freely bloomed Marguerites were deftly arranged, and give a mass at once bright and effective.

Bradford (Yorks), November 13th and 14th.

The seventeenth annual exhibition arranged by the Bradford and District Chrysanthemum Society was opened in St. George's Hall, Bradford. Exhibits were included from Rugby, Penrith, Chippenham (Wiltshire), Ripon, Chester, Liverpool, Leicester, Cardiff, Hull, and other places remote from Bradford. A further demonstration of the committee's enterprising policy was to be found in the amount of prizes offered in the chief open competitions, in one of which, in addition to a silver challenge cup, valued at ten guineas, money prizes amounting altogether to £28 10s. were offered for twenty-four Japanese blooms. The number of competitors for this coveted prize was eight, and Mr. A. Chandler, gardener to Arthur James, Esq., Coton House, Rugby, was first with the following principal flowers: F. S. Vallis, Marquis V. Venosta, Bessie Godfrey, Australie, Duchess of Sutherland, Mrs. Weeks, Sensation, Mafeking Hero, George Hamilton, Henry Stowe, Mrs. Barkley, Miss Mildred Ware, Fred Cadbury, Mrs. G. Mileham, W. R. Church, Lord Ludlow, Ethel Fitzroy, and Mrs. J. Bryant. Mr. Chandler was also successful in carrying off the prize for the champion Chrysanthemum bloom in the exhibition, a specimen of the variety F. S. Vallis. This flower, it may be mentioned, was no less than 8½in in height, the circumference being not so extraordinarily large. Mr. F. J. Clark, of Leicester, came a splendid second to Mr. Chandler's first, and the third prize was awarded to Mr. F. S. Vallis, of Chippenham, Wiltshire, a gentleman who enjoys the reputation of being one of the most successful cultivators of the Chrysanthemum in England. In the incurved section Mr. Emanuel Ellis, of Haswall, Cheshire, was first with the following beautiful flowers: Madame Ferlat, F. Hammond, C. H. Curtis, G. Symonds, Perfection, Duchess of Fife, Pearl Dauphinois, Edith Hughes, V. Foster, J. Seward, Fred Palmer, Lady Isobel, Ralph Hatton, Pearl Palace, Glory Bruant, Mrs. W. G. Jones, and Nellie Southam. Mr. Ellis was also the winner of the first prize in this class last year, and his exhibit this year includes very remarkable specimens.

For the taste and skill displayed in the arrangement of the hall compliments are to be offered to Mr. W. Horsman, chairman of the committee, and his colleagues, among whom are many professional gardeners, and Mr. H. Spencer, hon. secretary, who have been assiduous in their efforts to promote the success of the exhibition. The following contributed exhibits "not for competition": Messrs. W. Wells and Co., Limited, Redhill, Surrey, group of Chrysanthemums; and Mr. Arthur Edwards, florist, Arnold, Notts, "Edwardian" table and room decorations. The following were the judges: Mr. Wilson, Swanland Manor, near Hull; Mr. Leadbetter, Tranby Court, Hull; Mr. Ireland, Sedgwick House, Kendal; and Mr. M. Midgley, Bingley.

Leeds Paxton, November 13th and 14th.

This year's exhibition compared very favourably with other years, and was very tastefully arranged in the Town Hall. Excellent exhibits of cut flowers were to be seen, including the varieties shown in vases, grown naturally, single, and Japs. The receipts were as good as last year, and these were equal to the demands of expenditure. A record was created when J. Boyle, Esq. (gardener, Chas. Shaw), Askett Hill, Roundhay, won both challenge cups, open and local, for thirty-six blooms, eighteen Japs and eighteen incurved, distinct; and twenty-four, being twelve of each. He is a local man, and the excellent specimens exhibited by him reflect great credit for so young a grower.

The show was almost solely representative of local floriculture, but the quality is none the less admirable, and indicative of a high degree of skill. First prize in the open class for miscellaneous groups of plants was taken by the Hotel Majestic, Harrogate, with Mr. Matthew Kitchen, Roundhay, second, and Mr. T. G. Mylchreest, Thorner, third. In the open class for thirty-six Chrysanthemums (cut blooms), half incurved and half Japanese, first prize was taken by Mr. J. Boyle, Askett Hill, Roundhay, with Mr. R. I. Critchley, Dewsbury, second. Mr. Critchley was first for eight vases of Chrysanthemum blooms, and Mrs. Bowring second. The Hotel Majestic took premier honours for twelve vases of naturally grown Chrysanthemums, and also for the same number of vases of blooms of single varieties, Mr. J. Boyle being second in the former, and Mr. R.

Critchley in the latter instance. The prizewinners in the local class for twenty-four blooms of Chrysanthemums (twelve incurved and twelve Japanese) were Mr. J. Boyle and Mrs. Bowring in the order named. Mr. Matthew Kitchen, Roundhay, was first for twelve blooms, Sir James Kitson coming second. The chief winners in the classes for fruit are Mr. T. Artton (Rawdon), Ald. A. T. Walker, Mrs. White, and Mr. Mylchreest. The judges were Mr. W. Daniels (Dewsbury), Mr. F. R. Hayes (Keighley), Mr. Chas. Lawton (Welton, Brough), and Mr. D. Williams (Duncombe Park).

Sheffield (Yorks), November 13th and 14th.

SUMMARY.—A very excellent show was displayed. Mr. Higgs was forward with incurveds, and Mr. Vallis with Japs. Messrs. W. Clibran and Son, Artindale and Son, H. J. Jones, and S. W. Seagrave staged splendid non-competitive exhibits.

This show, which is probably the most important in the North, was held in the Cutler's Hall on Friday and Saturday last. Competition was extraordinarily keen in the cut bloom classes. Japs were a wonderful show, while incurveds were very good, Mr. Higgs's exhibits being in the pink of perfection. The groups were an improvement upon previous years, and were very creditable. Table decorations were very good. The "Trade" turned up in full force.

The entries were in excess of previous years, and the standard was invariably high, in many cases the whole of the four judges being called in to decide the order of merit. The judges were Mr. H. J. Jones, Mr. D. B. Crane, Mr. W. Kipps, and Mr. T. Welch, and their opinion was that the incurveds were finer than at the Crystal Palace. In the open class for twenty-four of this section, eighteen distinct varieties, prizes £7 10s. and silver medal: £5, £3, and £2, Mr. Higgs was first with a superb lot, the best of which were May Phillips, W. Higgs, Mrs. F. Judson, Chas. Curtis, C. Blick, Hanwell Glory, Ma Perfection, Ialane, Miss A. Dighton, and Mrs. Bernard Hankey. It is worthy of note that Mr. Higgs has never been placed second for incurveds for six years. Mr. G. W. Drake, of Cardiff, was a good second, with J. D. Ellis, Esq. (Mr. Alderman) and the Dowager Lady Hindlip (Mr. Crookes) third and fourth respectively.

In class 2, for twenty-four Japs, there was very close competition, and here Mr. F. S. Vallis was placed first with a very fine lot, in which W. R. Church, F. S. Vallis, Sensation, and Nellie Pockett were particularly good. Mr. Higgs was a good second. Mr. Crookes was third with a good lot, which, though containing good examples of F. S. Vallis, W. R. Church, Madame Paolo Radaelli, Duchess of Sutherland, Lord Ludlow, Mildred Ware, Calvat's '99, Madame Cadbury, General Hutton, and Mrs. Barkley (the latter particularly fine), somewhat lacking in arrangement of colour. Mr. Alderman was fourth. In class 3 (twelve incurveds) Mr. Higgs was again first and Mr. Crookes second; while for twelve Japs Mr. Crookes was first, and in this board Sensation was undoubtedly the best, though there were good examples of Marquis V. Venosta, F. S. Vallis, M. Louis Remy, and Bessie Godfrey. Mr. Vallis was second with fine blooms of W. R. Church, Nellie Pockett, F. S. Vallis, Sensation, and Madame Hoste. For six incurveds Mr. Crookes was easily first, with Mr. J. Harrison second; and for six Japs Messrs. Crookes, Drake, and Harrison, in the order named. For a vase of five Jap blooms, one variety, Mr. T. Lucas, Ashgrove, was a good first with Miss Roberts; Mr. W. Green and J. G. Graves, Esq. (Mr. Abbott), next, in this order.

In the district classes (limited to twenty miles radius), Mr. Abbott was first with some fine blooms and foliage plants nicely arranged, closely followed by G. Senior, Esq. (Mr. R. C. Baker).

Black Grapes: Mrs. A. Barnes (Mr. Nelson), Chesterfield, Mr. Alderman, and Mrs. Tuckwood, were so placed in both the open and district classes; while for white Grapes Messrs. Nelson, Abbott, and Tuckwood were in the order named.

Begonia Gloire de Lorraine, six plants: Mr. C. Scott, Worksop, first; and Mr. Lucas, Ashgrove, second. In the classes for twelve incurveds, twelve Japs, six incurveds, and six Japs, Mr. Alderman, Mr. Scott, and Mr. T. J. Nelson were placed in the order named in each class; while for twelve Jap blooms, arranged with foliage plants for effect, Mr. T. Lucas was first and Mr. C. Scott second.

In class 57 (table decorations) Mr. A. Sheridan led with a very effective arrangement of Gloire de Lorraine Begonia and Lily of the Valley; Mr. J. Adlington, Chesterfield, being second with a chaste arrangement of Cattleyas and Den-drobiums. Small foliage plants, however, gave it a rather heavier appearance. Mr. Bateman was third with single Chrysanthemums rather overdone. The cottagers' classes were exceedingly well contested.

Another very attractive exhibit which came in for unqualified admiration was that of Messrs. Clibran and Son, of Altrincham. This firm had about 100 pots of Cyclamens with a profusion of blooms. It is undoubtedly a fine strain, flowers of large size and good colour, their Improved Salmon Queen being a distinct improvement. The early state of these was quite an attraction; and a grand display of Clibran's Celosias came in for a great

deal of attention. They were very fine. In *Chrysanthemums* the firm showed some valuable varieties of singles, particularly fine being *Stella* (white) and *Mrs. R. N. Parkinson* (yellow). These should prove a great acquisition to our single varieties. They also had *Lilian*, *Richard Boston*, *Mrs. E. Roberts*, *Emily Clibran*, *Mrs. Henry Herbert*, *Mr. Will Jordan* (grand colour), and *Crissy*. Two new incurveds were shown, being the firm's own seedlings: *Wm. Biddle* and *Souvenir de Wm. Clibran*, both good; also *La Fusion* (new). Of the Japs they had *Queen Alexandra*, *Miss Baden Powell*, *Lord Hopetoun*, *Bessie Godfrey*, *W. Duckham*, &c. A fine batch of retarded *Lily of the Valley* was also exhibited, and a gold medal was awarded. The exhibit, as a whole, fully sustained the reputation of the firm, and was a distinct credit to *Mr. H. Evans*, who was in charge.

A distinct feature of the exhibition was the exhibit of *Messrs. W. Artindale and Son*, which showed the florist's art to perfection. Among the floral designs was a large cross of *Neapolitan Violets*, a cushion of *Neapolitan Violets* with "R.I.P." worked in *Lily of the Valley*, and *Dendrobiums* and *Cattleyas* in relief. They had an immense anchor of *Chrysanthemum J. H. Wright*, an ivory-white, an invaluable variety for the purpose; also a floral Bible of *Violets* with "I.H.S." worked in relief; and a heart composed of *Lily of the Valley* and *Lawson Carnations*. There were also wreaths and chaplets and baskets of *Cattleyas* and *Roman Hyacinths*, *Rose Catherine Mermet*, *Franco Carnations*, and a grand batch of *Turnford Hall Begonia*. This firm also exhibited thirty-two immense *Pears*, weighing over 65lb. These *Pears* had taken first prize for five, and for twenty-five, heaviest *Pears* at the *Jersey Pear Show*. A gold medal was awarded.

Another fine exhibit was a grand group by *Mr. S. W. Seagrave* (gold medal), which included some grand pieces of *Begonia Sanderi*, *Acalyphas*, *Cocos Weddelliana* (very fine), and *C. Veitchi*. The arrangement was very effective. This firm had also a grand display of winter flowering *Geraniums* (*Pelargoniums*), particularly good being *The Sirdar*, *Zenobia*, *Snowdrop* (pure white), *Barbara Hope*, *Mary Pelton*, *Winston Churchill* (new), and *Chaucer* (very fine).

Mr. H. J. Jones exhibited some novelties for 1904 in Japs and incurveds, including *A. L. Stevens*, *Brenda*, *Mrs. J. Dunn*, *Maud du Gros*, *E. H. Parker*, *Miss P. Chittenden*. Certificates were given for *Major Powell Cotton* (Jap) and *W. Pascoe* (incurved).

The silver cups for affiliated societies were won by the *Nether Hallam Society* (*M. H. Willford*, secretary) for twenty-four blooms; and by the "Sun Inn" Society (*J. H. Reader*, secretary) for twelve blooms; "Sun Inn" and *Chesterfield* being second and third for twenty-four, and *Nether Hallam* and *Mexbro'* second and third for twelve.

At the opening ceremony *Councillor F. A. Kelly, Esq.*, humorously asked if gardeners could not produce a blue *Chrysanthemum*. The president, *S. Roberts, Esq., M.P.*, made a feeling allusion to the death of the late secretary, *Mr. Wm. Houseley*, and appealed for increased support to the society. A word of praise is due to *Mr. Willford*, the new secretary, for the able and business-like way in which he grappled with the arduous duties taken up at a critical time, and under difficulties created by the sudden death of *Mr. Houseley*, just when the real work of the year was commencing.—*W. L.*

West Hartlepool, Nov. 17th and 18th.

The annual autumn show was held in the Town Hall, and if the entries were less numerous than in some past seasons, it was owing to the unusual wet weather prevailing in the neighbourhood during the greater part of the year. Even on this occasion the exhibits were numerous enough to make an interesting display. In the open classes there was keen competition. For a group of *Chrysanthemums* to occupy 54 square feet there were but two entries. Both, however, were good. *Mr. T. Smith*, gardener to *W. Maclean, Esq.*, Grantully, West Hartlepool, was distinctly ahead with dwarf plants well furnished with foliage, and carrying good blooms. The arrangement, too, was all that could be desired. *Mr. A. Lauder*, gardener to *T. Robinson, Esq.*, Briarfields, West Hartlepool, second, with smaller blooms in an effective arrangement. Groups of *Chrysanthemums* in the amateur section were remarkably good. *Mr. W. Mossman*, West Hartlepool, was first with an especially neat group. *Mr. J. A. Wright*, West Hartlepool, second.

CUT BLOOMS.—For twenty-four incurved there was but one entry, *Mr. T. Smith*, who was awarded first prize for medium sized, neat examples. The following were especially noteworthy: *Ma Perfection*, *Miss N. Southam*, *Madame Ferlat*, *Hanwell Glory*, *C. H. Curtis*, and *Mrs. W. E. Egan*. In the Japanese section there was keen competition and good blooms. For twenty-four in not less than eighteen varieties *Mr. A. Waller*, gardener to *J. Hill, Esq.*, Brockley, was an easy first, with large, handsome blooms of *Mrs. Barkley*, *Mons. Chenon de Léché* (premier bloom in the show), *W. R. Church*, *Simplicity*, *Mrs. T. W. Pockett*, *Mrs. Mileham*, *F. S. Vallis*, *Nellie Bean*, *M. Louis Remy*, *Mrs. E. Hummel*, *Lord Salisbury*, *Mrs. J. E. Clay-*

ton, *Madame von Andre*, and *Mrs. Greenfield*. For six Japanese yellow, *Mr. Findlay*, gardener to *W. Dorman, Esq.*, Grey Towers, Nunthorpe, won with *Lord Ludlow*. *Mr. Waller* second with *Mrs. Greenfield*. *Mr. T. Smith* third. For the same number, any white variety, *Mr. Lauder*, with *Nellie Pockett* in good condition, was the only exhibitor, and was awarded the premier place. For six, any other colour but those named, *Mr. Waller*, with really fine blooms of *W. R. Church*, was an easy first. *Mr. A. Findlay* followed, *Mr. Smith* coming third.

Japanese in vases made a good display. For four varieties, three blooms of each, *Mr. Findlay*, with really fine examples of *Mrs. Mileham*, *Le Grand Dragon*, *Gustave Henry*, and *Vivian Morel*, was an easy first. *Mr. A. Waller* second, *Mr. Lauder* third. The local classes created much interest. The chief class was that for twelve incurved and twelve Japanese, distinct. *Mr. T. Smith*, with compact blooms neatly staged, won the coveted award, silver challenge cup. *C. H. Curtis* (premier incurved bloom in the show), *Lord Alcester*, *Queen of England*, *Madame Ferlat*, *Miss N. Southam*, *Ernest Cannell*, *J. Agate*, and *Golden Madame Ferlat* were the most noteworthy in the incurved section. *Lord Ludlow*, *Kimberley*, *Henry Weeks*, *Mrs. Barkley*, *M. Chenon de Léché*, and *Miss Alice Byron* were conspicuous amongst the Japanese. *Mr. F. Jackson*, gardener to *J. F. Wilson, Esq.*, Pangbourne, West Hartlepool, second. *Mr. A. Lauder* third.

In competition for the "Emmerson" Cup amongst amateurs, twelve distinct varieties were asked for. *Mr. R. W. Nicholson*, 31, Thornhill Gardens, West Hartlepool, was the fortunate winner, with medium sized, neat blooms. *Mr. P. Harrison*, Percy Street, West Hartlepool, was a close second. *Mr. J. W. Wright* third.

A very pretty display was made in the class for six sprays staged in a vase. *Mr. R. W. Nicholson*, West Hartlepool, had the best of eight entries. *Mr. Mossman* second, *Mr. W. Shires*, West Hartlepool, third. In a similar class in another section there was a capital display. *Mr. A. Lockey*, West Hartlepool, was the most successful, with a pretty exhibit, well illustrating this type of *Chrysanthemum* for decoration. *Mr. W. Pouley*, West Hartlepool, second.

The Horticultural Club, London.

On Tuesday the 10th inst., the usual monthly dinner of this Club took place, under the presidency of *Mr. Harry J. Veitch*, and was well attended, a paper having been announced on "Vegetable Curios," by *Mr. G. S. Saunders, F.L.S.*, as the special attraction on this occasion. The branch of this extensive theme, with which the lecturer specially dealt, was that of malformations in flowers and fruit, rather than the more general one of "sports" proper, and the paper was rendered the more interesting by the exhibition of a large number of beautifully-executed drawings of specimens which had come under *Mr. Saunders'* personal notice. A considerable number of these represented curious divergencies from the normal structure of *Cypripedium* flowers, which appear peculiarly prone to their production, the various parts of the flower appearing abnormally changed in form, or even duplicated or reversed, although in the large majority of cases the modifications can be traced as mere change of form of normal parts, and rarely as actual additions. In these cases of simple malformation, as in most of the others described and exhibited, such as double fruits, foliaceous flowers, and fasciation, the peculiarity was almost invariably confined to the individual plant, or even the individual flower; and although recurrent cases were cited, they seemed, as a rule, incapable of reproduction through the seed. It was also pointed out that similar eccentricity was much rarer in leaves than in flowers, due, presumably, to the higher specialisation of the parts of the latter, many abnormal forms of which were obviously due to more or less reversion to the primary leaf type.

The cause is a mystery, as it is with "sports" proper. In the subsequent discussion, in which the *Rev. Mr. Henslow*, *Mr. Harry Veitch*, *Mr. Walker*, *Mr. Druery*, *Mr. Chas. Pearson*, and *Dr. Cooke* took part, *Mr. Henslow* cited a number of abnormalities on similar lines to those mentioned by the lecturer, and gave some explanations regarding the particular modifications of the floral organs, &c., involved. Double flowers were also alluded to, very opposite opinions being expressed as to the reason why they appeared, starvation being adduced as one reason, while *Mr. Harry Veitch* cited the very apposite, though opposite case, of double *Rhododendrons* raised by his firm by fertilisation from apparently accidental petaloid stamens, where the highest culture prevailed throughout. *Mr. Walker* mentioned several cases, and said he could cite many more, of *Narcissus* sports or reversions occurring in his cultures, which he felt inclined to refer to sudden change of treatment. *Mr. Druery* referred to the innumerable curios which had originated among Ferns, in which modifications of the leaf equivalents, or fronds, were singularly marked as well as numerous. He also pointed out the strong resemblance and yet essential difference between fasciation and creting to which most Fern species seemed subject, though among flowering plants no definite instance

could be cited. Finally he strongly deprecated the classing of symmetrical sports, capable of true reproduction through spore or seed, with what had been previously described as Barnum-like "freaks," which, he maintained, belonged, like the malformations cited by the lecturer, to a different category altogether. A hearty vote of thanks to the lecturer concluded the proceedings.

Birmingham Gardeners' Improvement.

At the latest meeting the subject was "Vegetable Growing in and Around Large Towns," by Mr. Alfred Cryer, Berrow Court, Edgbaston. The lecturer contributed information regarding the difficulties he had had to contend with on a hungry soil—a light one overlying a deep gravel bed. But with a judicious application of suitable animal and chemical manures, he had been enabled to produce vegetables of excellent quality, though not so large as those grown under more favourable circumstances. His large collection of about twenty kinds testified to the merit of his cultivation. A certificate of merit was awarded the collection. A first class certificate was awarded Mr. F. Dedicott, gardener to W. H. Wiggin, Esq., Griffins Hill, Selly Oak, for very fine examples of Cyclamens grown under the system advocated by Mr. Lohrmann at one of the society's meetings last spring. Mr. Lohrmann expressed his gratification in witnessing such a signal success of the adoption of his system of culture. He also remarked upon the comparative methods of vegetable culture in North Germany and the severity of some of the winter seasons there.

Liverpool Horticultural.

On Saturday evening, the 7th inst., the above association commenced its series of readings and discussions, and on this occasion Mr. E. F. Hazelton, The Gardens, Knowsley, read a paper on "The Culture of Pot Roses." The Hall (7, Victoria Street) was crowded. Mr. Hazelton dealt with his subject in a short and pithy manner, yet, withal, practical and to the point; describing the history of the Rose, the different methods of propagation, potting material to be used successfully; treatment which should be carried out in forcing Roses, and a list of the most suitable varieties. Although the paper was somewhat shorter in length than is usually read at these meetings, we do not remember a better or more instructive discussion being created, lasting, as it did, over an hour, and drawing out points which had either been omitted or touched upon but slightly in the paper. Messrs. Ashton, Ranger, Haynes, Stoney, Ewbank, Waterman, and others took part in this, and Mr. Hazelton answered each question fully and in a most ready manner. Mr. Foster, chairman, congratulated the committee in having such a large attendance for their first meeting, and hoped that members would endeavour to bring friends, and show their appreciation of the trouble taken by the gentlemen who read these papers. A vote of thanks to Mr. Hazelton and the Chairman concluded the meeting.—J. S.

Young Gardeners' Domain.

Bouvardia Humboldti grandiflora.

The pure white flowers and delicious fragrance of this *Bouvardia* make it deservedly a favourite wherever grown, though its short period of flowering is rather a drawback. The old plants, having now gone out of flower, should be dried off and placed in a cold house till required, giving just an occasional watering to prevent them becoming quite dried up. To get a batch of young stock, a few plants should be placed in a warm house in January. Cuttings will soon be produced in quantity, and root readily round "thumb" pots in a propagating pit. When rooted they should be potted up into "thumbs," placed close to the glass, and gradually hardened off, stopping them frequently to get a bushy plant. The final potting in 48's should take place about the middle of June, a rather light compost suiting them well. They should be grown as hardy as possible through the summer. If larger plants are desired, the old stools should be cut hard back, and when growth has commenced be shaken out and potted in the same size pots. One shift after this will suffice, and the same attention to stopping will produce a large head. The final stopping should take place not later than the end of July, and September should see the plants housed in a warm greenhouse.—W. J. B.

Cannas as Winter Blooming Plants.

These are subjects which are chiefly grown for summer decoration, and it is not generally known that they can be had in bloom during the dark days of winter. Where suitable room can be given them, and a temperature of from 60deg to 65deg Fahr. maintained, a succession of batches can be had during

the next three or four months with a little forethought and attention. A heated pit or small forcing house is best adapted for the purpose, as the plants can be grown near the glass, which is a great advantage in many respects, as they require every ray of light possible to be obtained at this time of the year.

Prepare a number of offsets from plants which have flowered during the summer, and which are large enough to produce a flower spike, by rubbing out all surrounding eyes so as to leave one strong crown. Pot these singly in well drained 5-inch pots, in a compost consisting of two parts good fibry loam, one of well rotted farmyard manure, and the remaining part of good flaky leaf mould, with a fair sprinkling of coarse sand. Place the plants in a suitable structure, and in the temperature above stated, and give a soaking of tepid water. Keep the atmosphere close and moist until the offsets start into growth, after which air can be afforded on suitable occasions. Being gross feeders the pots will soon be filled with roots, and feeding must be resorted to, and they will stand a good amount of this treatment. Nothing suits them better than liquid cowdung manure, with an occasional light sprinkling on the surface of the soil of Clay's or some other well-approved fertiliser; and should any small breaks appear they can be snapped off under ground.

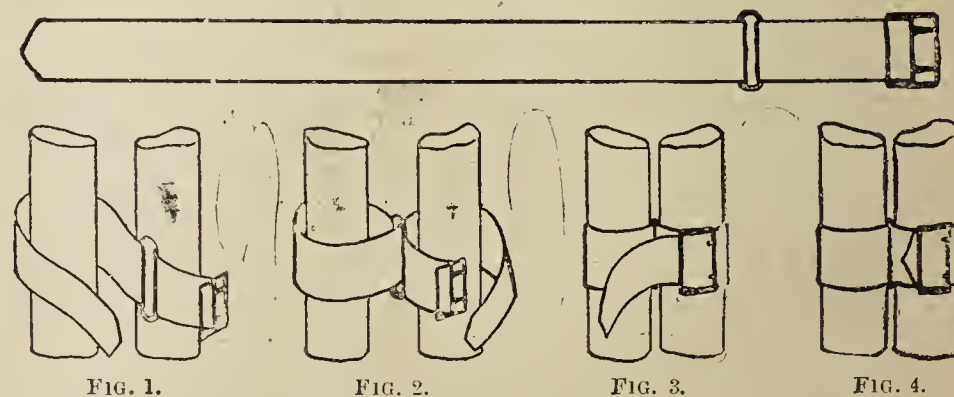
In three months, or thereabouts, from the time of potting they will each form a flower spike, and as they approach the time of opening the temperature should be gradually reduced until it reaches that of the house or conservatory wherein they are to remain whilst in bloom, and it will be found that they will make a lasting and brilliant display. A few good varieties are Admiral Avellan, Asia, Black Prince, Charles Henderson, Duke Ernst, Elizabeth Hoss, Hesperide, Oscar Dannecker, President Meyer, and Queen Charlotte.—E. B., South Berks.

[Other communications have unavoidably to be held over.—Ed.]

Patents and Inventions.

Beckett's Tree Ties.

These are the invention of the well-known horticulturist, Mr. Edwin Beckett, and were first shown at the fruit and vegetable show at Chiswick this autumn. They are claimed to



To affix them: Take the tree tie, the buckle outwards and towards the stake. 1st—Pass the end between the stake and the tree and round the latter (Fig. 1). 2nd—Pass the end through the loop and between the tree and the stake (Fig. 2). 3rd—Pull tight round the tree and buckle firmly round the stake (Fig. 3). 4th—The end, instead of being cut off, may be turned in to allow of slacking off with the growth of the plant. If a tie be fixed nearly at the top of the stake it will prevent that fretting of the bark which so often disfigures and injures staked trees (Fig. 4).

Beckett's Tree Ties.

entirely supersede the old-fashioned method of tying with strips of cloth and twine. They pack quite flat, but when in use form a complete figure 8 round the tree and support. The material of which they are made is almost like canvas, of a brownish colour. Their advantages may be summed up as follows:—(1) Rigidity. No gyration or friction possible. (2) Simplicity. No loose parts, each complete in itself. (3) Economy. An enormous saving of time and labour. One person can easily affix them. (4) Adjustability. A curved stem can be gradually and effectively straightened. (5) Pliability. Cannot injure the bark; will fit any shaped or sized tree or stake; inconspicuous, neat and strong.

They are made in five sizes, to suit anything, from a Rose tree upwards. Size 1, which is $\frac{1}{2}$ in in width and 6 in in length, costs 1s. 3d. per dozen, or 12s. per gross; while size 5, which is $1\frac{1}{2}$ in by 18 in, costs 2s. 9d. per dozen, or 30s. per gross. Sample bands of each size may be had, post free, for 1s. These Ties are obtainable from all nurserymen and horticultural sundriesmen, or direct from the sole maker, Mr. E. C. Lawson, 32, Ashley Road, Hornsey Rise, London, N.



Fruit Forcing.

PEACHES AND NECTARINES: EARLIEST FORCED HOUSE.—The trees must now be started to ripen the fruit in May, when the varieties consist of Hale's Early, Condor, Dr. Hogg, Stirling Castle, Royal George, and Dymond Peaches, with Early Rivers, Lord Napier, Stanwick Elruge, Humboldt, and Dryden Nectarines. The very early varieties, Alexander or Waterloo, Duchess of Cornwall, and Amsden June Peaches, with Cardinal Nectarines, need not be started until the new year to ripen at the time named. The trees should be thoroughly examined for brown aphid, and if there be the least trace of the pests the affected parts should be brushed over the same way as the growths with tobacco water, and the house fumigated on two consecutive evenings with tobacco paper or vaporised with nicotine. If the roof lights have been drawn off, the border will have been thoroughly moistened down to the drainage, but there must not be any mistake about this, for it is important that the trees have sufficient water at the roots, therefore if any doubt exists on that point give a thorough watering, or apply liquid manure for the benefit of weakly trees. Fire heat need only be employed at night to exclude frost, and by day to ensure a temperature of 50deg. Commence ventilating at 50deg, and close the house at that temperature, ventilating fully without lowering the temperature below 50deg in the daytime.

Syringe the trees in the morning and early afternoon of fine days until the buds begin to show colour, but then (and on dull days prior thereto) discontinue the syringing, yet maintain a genial moisture in the atmosphere by damping the paths and borders on bright mornings and fine afternoons, admitting a little air constantly at the top of the house. Aim at bringing the trees on gradually to secure well-developed blossoms, strong in the stamens, with anthers laden with perfect pollen, and the pistils stout, well advanced above the ovary, and perfect for fertilisation. These, however, will be perfect or imperfect as they are formed in embryo in the previous season, but they can be enfeebled by bringing them on too rapidly, and made thin in the petals, weak in stamens, and slender in pistil, with ill-developed ovary, by not affording time for their perfect development.

HOUSES STARTED AT THE NEW YEAR.—Trees started early in the year, and of the old forcing varieties, must be kept as cool as possible. This is best effected by keeping the roof light off the house until the time of starting. The severest weather does not injure the wood or buds, and the trees are then in perfect rest, so far as it is practicable in our climate. Pruning will have been attended to, which is a light affair where proper attention has been given to disbudding and cutting out, after the fruit is gathered, the useless wood. The trees, however, must be examined to remove wood not required and that overlooked during growth. Brown scale is sometimes troublesome, and it is impatient of extremes. Syringing with water at a temperature of 140deg to 150deg frees the branches from the pest, but the water must not be used excessively, it sufficing to rinse every part with hot water. Frost also has a decisive effect on brown scale, and trees exposed in the rest season are seldom affected with it, but it is often introduced from plant houses by persons in charge of ventilation. Trees under fixed roofs may be cleansed from scale by washing them with a solution of carbolic or paraffin soap, 4ozs to a gallon of water, using a stiffish brush, taking care not to dislocate the buds. Secure the trees to the trellis, allowing plenty of space in the ties for the swelling of the branches. Remove any loose, moist soil; supply fresh loam, not more than 2in thick, on the roots, to which add a quart of bonemeal, a similar quantity of soot, and double the amount of wood ashes per barrowload, the whole well incorporated. Mulching the surface with short manure should be deferred until the trees are somewhat advanced in growth. Houses with fixed roofs should be kept as cool as possible, ventilating to the fullest extent, excepting when severe weather prevails.

HOUSES STARTED IN FEBRUARY.—The trees started early in February ripen the fruit late in June or early in July, and will now require similar treatment to that advised for those in the house to be started at the new year. The roof lights are very much better removed, but it is a common practice to use houses of the kind for plants requiring protection from frost, especially Chrysanthemums. It is not an advisable proceeding, for the Peach trees are deprived of that rest so essential to success, and it often excites them prematurely, being then followed by a check, as is usually caused when the Chrysanthemums are over by throwing the house open, inducing the

buds to fall. It is also a bad system to leave houses and trees unattended after the leaves fall, and the delay is taken advantage of by red spider and other pests to find safe retreats. The house, therefore, should be thoroughly cleansed, the trees pruned, readjusted to the trellis, and every needful operation performed, so that a start may confidently be made when the proper time arrives.

HOUSES STARTED IN MARCH.—The trees in these structures will ripen the fruit in July if brought forward by artificial heat, but where warmth is only given when the trees are in bloom, and to secure the safety of the young fruit from frost, the fruit will not ripen until August or September if kept cool, and the varieties are the usual midseason ones. The house may be a Peach case, or glass-covered wall, with sufficient hot-water piping to exclude frost; afford a genial warmth when the trees near blossom, accelerating the ripening as may be necessary, and ripening the wood in cold districts. The trees are now leafless where they have been subjected to artificial heat to ripen the fruit in August, and should undergo the operation advised for those in the early houses, the roof lights should be removed, the hot-water pipes emptied, leaving the lights off until the blossoms show colour, unless it is desired to start the trees before. If the lights are fixed, the ventilators should be thrown open to the fullest extent, except when frost prevails.

LATEST HOUSES.—Late Peaches are quite as valuable as early ones, considering that they are had at much less cost, for all that is required for late houses is a gentle warmth in the hot-water pipes in spring and autumn, and not always heat at those times. The fruit are noble at dessert, and, when well done, good in quality. Make no attempt to remove the leaves until they part readily from the trees by shaking the trellis. Cut out all the wood that has borne fruit, and all superfluous growths. Do not allow the soil to become very dry, but, if necessary, give water to moisten the soil down to the drainage. Keep the house cool by free ventilation, clearing away the leaves as they fall. Trees that grow too luxuriantly should be root-pruned and lifted whilst the leaves are upon them; but the wood being unripe, they must not be lifted until the leaves have for the most part fallen, or the unripe wood will shrivel and die. If the wood does not ripen well, turn the heat on by day with moderate ventilation, and shut it off in the afternoon, so as to have the pipes cool by night, and then open all the ventilators, unless frost prevails, when ventilate according to circumstances, for a sudden collapse of the foliage is detrimental to the tree's health.—ST. ALBANS.

Kitchen Garden.

CELERY.—Further growth will not be made by the main crops of Celery, especially those which are now of large size, hence the final earthing should be carried out, if not already done. Plenty of soil should be worked round the plants, drawing the stems closely together to prevent it entering the hearts. Bank the soil well up towards the tops, leaving about 6in of leaves or tops visible. The later rows of Celery should be earthed in proportion to their size. For the present it is not advisable to carry the soil above the heart leaves. In mild weather the plants will advance in size, but growth is very slow now, and small plants will never become large; but if short and sturdy plants are well blanched the quality is good.

SEAKALE.—The foliage of Seakale having now all died down, it is necessary to rake it off the beds. Then lift a portion of the roots, and select the best and strongest central main roots with a well developed crown to each, and lay in moist soil for the purpose of using them for forcing in a short time. This is better than waiting until they are actually required. In trimming the roots for forcing purposes there will be a number of the slenderer portions which are of no present use. They may, however, be prepared as planting roots. Cut them to a uniform length of 6in, utilising all those of the thickness of the little finger. In order to distinguish the top from the bottom, cut the former straight across and the latter slantingly. Lay them in a moist soil, or sand, in a sheltered place outdoors, and by April a ring of growth will be forming, and they may be planted.

CAULIFLOWERS AND EARLY BROCCOLI.—If any heads of Cauliflower still remain it will be advisable to lift the plants and place under shelter. Pull up and destroy the old stumps. Early Broccoli which may be just beginning to form heads, must have these protected from heavy damp and frost. This may best be done by breaking some leaves over them, though plants with finely developed heads, or promising such, may be lifted and laid in under cover.

BEET.—Recently lifted Beetroots, having now become dried, they may be stored in a cool dry place, between layers of dry soil or ashes. Arrange the crowns outwards. When stored in damp material young rootlets are encouraged, which in time become very strong, and are detrimental to the quality of the roots. In the event of all the roots not being lifted, it is advisable to do so before severe frosts occur.

CARROTS.—These roots are better out of the ground and placed in a cool store. It is not important to dry them so thoroughly, but they must rather be on the dry side than the wet side, as if stored in heaps for any length of time rootlets will be emitted.

POTATOES.—The stores of tubers having now become to a great extent dry, should be examined for any indications of disease in the tubers. This is important, as any infected specimens will soon damage others. Remove the small tubers, and at the same time a selection for saving for seed may be made. Tubers intended for table use must have light excluded from them, and additional covering given when severe frosts are imminent.

PARSLEY.—Pick out all yellow leaves and unsuitable foliage from the Parsley bed. The beds of autumn seedlings should be kept clear of weeds. A few strong plants may be potted for taking under cover in severe weather, but the beds of plants must be also protected.

WINTER GREENS.—Savoy, Brussels Sprouts, Borecole, and Broccoli, having a proportion of yellow leaves hanging about them, should have these cleared off, and the plants made tidy for the winter. Weeds, which have grown luxuriantly and revelled in the damp, should not be allowed to choke the plants and disfigure the ground.

TRENCHING GROUND.—Some portion of the kitchen garden should be deeply trenched each season. Where the ground has not been moved for years to a fair depth, bastard trenching, which consists of deep digging without changing the position of the spits, should be adopted. This obviates bringing inert soil to the surface and burying the best.—E. D. S.

Trade Notes.

Roses; The "Dean's Collection."

Referring to our remarks on page 397 in the notice of the Very Rev. the Dean of Rochester, Messrs. B. R. Cant and Sons, Colchester, write to say that they alone supply the selection termed the "Dean's collection."

John Russell, Brentwood.

We have received the following letter from the Essex Nurseries, Brentwood:—"Permit me to point out that in your notice of the National Chrysanthemum Society's great show at the Palace, you have credited Mr. John Russell, Richmond, with the display of a hardy group, whereas it was my exhibit, 'John Russell, Brentwood.' The firms are now independent of each other. I trust that you will kindly correct this.—J. RUSSELL."

Timber Growing on a Commercial Scale.

Messrs. Dicksons and Co., of 1, Waterloo Place, Edinburgh, in sending us their catalogue of forest trees and other nursery stock, draw attention to their remarks made on the first few pages of the catalogue. All who secure one of these catalogues can read the letter in extenso, and we may only notice in this place that Messrs. Dicksons are eager to see the propositions made by the recent Departmental Committee on Forestry made effective. Great Britain has twenty-one million acres of waste or idle land, and their afforestation is a matter of "grave national concern." The firm also refer to the Common Larch "canker," and they suggest as a substitute to the Common or European Larch the Japanese Larch (*Larix leptolepis*). This is a quick and vigorous grower, and quite hardy.

Leek Show at Kelso, N.B.

The firm's annual open Lyon Leek Competition took place within the premises of Messrs. Laing and Mather (incorporated with Stuart and Mein), and was again an unqualified success. There were nine prizes offered, and the conditions were that each exhibit should comprise three Leeks, grown from seed purchased from the firm. Exhibits were sent in from all parts of the country, even from as far south as Devonshire and Cornwall. In all there were thirty-six lots shown, and they made a very attractive display, the quality and size of most of the exhibits testifying to the excellence of the "Lyon" variety. The first prize lot, shown by Mr. Hood, Dryburgh, contained three remarkably good and evenly-grown Leeks, the blanched portions of which were nearly 18in in length, being at the same time close and fine in texture. The second prize lot, belonging to Mr. A. J. Harrison, Lauder, although not so evenly drawn as the first, were also very fine, and one of the three, which had fully 18in of blanch, attracted considerable attention. The following were the prizewinners:—1, R. Hood, Dryburgh, St. Boswells; 2, A. J. Harrison, Lauder; 3, W. Moore, Nunwick Gardens; 4, John Wightman, Eslington Park Gardens, Northumberland; 5, W. Hodgson, Prudhoe; 6, James Steel, Kelso; 7, Thomas Fairbairn, Benrig Gardens, St. Boswells; 8, Thomas Watson, Cannongate, Alnwick; 9, R. T. Rae, Sunlaws, Kelso; specially commended for quality, J. M. Burkett, Dunfermline. The judges were Messrs. Charles Street, Floors Castle Gardens, and William Chaplin, Springwood Park Gardens.—("Kelso Mail.")



TO CORRESPONDENTS

* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.

GARRYA ELLIPTICA FRUITING (J. S.).—It is comparatively rare for *Garrya elliptica* to produce fruit, as it is dioecious—that is, bears the male and female flowers on different plants, and the male plant is the one chiefly grown. Are you sure that your plant is the true *G. elliptica*?

BOOK ON VEGETABLE GROWING (Juvenile).—"Beckett's Vegetable Growing for Exhibition," published by Messrs. W. H. and L. Collingridge, 148 and 149, Aldersgate Street, London, E.C., price 3s. 6d.; or if you require a smaller work, "Vegetable Culture," by A. Dean, F.R.H.S., published by Messrs. Macmillan and Co., London, price 1s.

ACACIA DRUMMONDI: BUDS FALLING (Puzzled).—"Would you kindly tell me through the medium of the Journal the reason of *Acacia Drummondii* dropping the buds? It is in a cool house, potted in peat and sand, and the roots are apparently healthy."

[We cannot explain the cause other than that the soil in which they are growing must have been too much dried at some recent date. This might cause a sudden change in the constitution of the plant.—Ed.]

CROSS BETWEEN RASPBERRY AND BLACKBERRY (O. J. D.).—You allude to the Loganberry, which is a cross between a Raspberry and a Blackberry, the former being the seed bearer, or a Raspberry crossed by a Blackberry. The fruit of this is borne in clusters, and is long and dark in colour, with a sharp acidity when half ripe, but of a rich flavour when black, when it is fit for the dessert. It bears very freely treated like a Raspberry. The Loganberry is shown natural size in the *Journal of Horticulture*, October 8, 1903, page 329.

CROSS BETWEEN RASPBERRY AND STRAWBERRY (Idem).—You may secure plants from any of our advertisers who are fruit growers. You will find the hybrid a dwarf growing (1ft) subject, with Raspberry-like foliage. It has a bushy habit. The fruits are like Strawberries, very gritty (from the seeds) and insipid. It is somewhat ornamental, but will not furnish a useful dessert.

CHRYSANTHEMUM RUST (D.).—Yes, the fungus is bad in many places, and has evidently come to stay. So far as we know the best preventive treatment is spraying at intervals, dating from the growth of new leaves, with potassium sulphide solution, which not only destroys the rust spores, but also those of other fungus pests that attack Chrysanthemums. Removing leaves or plants showing the slightest trace of the disease is excellent practice. The fungus, now recognised as *Puccinia Chrysanthemi*, is as commonly seen in the rust stage as *Uredo Chrysanthemi*, as first stated in the *Journal of Horticulture* in 1897, and shown in the number for October 13, 1898, page 285, has no connection with the fungus found on Hawkweed (*Hieracium*), being more closely related to, if not a form of *Puccinia tanacetii*. Where the disease has existed it is very important to destroy all leaves likely to produce or contain teliospores, otherwise a recurrence of the disease is practically certain. The uredo form continues in the living leaves of plants grown under glass during the winter, hence a careful look-out for the fungus must be constantly kept, and the affected leaves collected and burnt before the pustules burst and liberate the spores.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (S. B.).—1, *Pelargonium citrodorum*; 2, *P. tomentosum*; 3, *Reidia glaucescens*; 4, *Croton* (*Codiaeum*) *Reedii*. (F. J. T.).—1, *Crocus damascena*; 2, *Rudbeckia digitata* (late flowering); 3, *Chrysogonum virginicum*. (B. P.).—1, *Muehlenbeckia varians*; 2, *Magnolia grandiflora*; 3, *Kadsura chinensis*. (W. L.).—1 and 4, *Lastrea filix-mas* (male Fern); 2 and 3, *Lastrea dilatata* (Broad Buckler Fern); 5, *Polypodium vulgare* (common Polypody); 6, *Arbutus Adrachne*.

Trade Catalogue Received.

Messrs. W. Clibran & Son, Altrincham.—*Chrysanthemums*.

Weather Notes.

Devonshire.

I am in receipt of a letter from a friend at Westward Ho (Devon), and from its contents it would appear that even in that most favoured part of the kingdom the evil effects of the past weather have been felt. He says, "Rain, rain every day, and plenty of it." He also gives a graphic account of the great gale in September, which must have been decidedly more severely felt there than in Scotland. He says it had a curious effect upon the foliage of trees. The leaves afterwards turned almost black, and had the appearance as if burned by fire, and after a few days began to fall off, so that all the trees were practically bare by the middle of October. "And now," he says, "a good many are springing into bud again, and we have a Pear tree in full bloom, with Lilac trees all budding." My friend also says they had little or no fruit in the garden, though it is full of fine bearing Apple and Pear trees.—D. C.

October Weather at Belvoir Castle.

The prevailing direction of the wind was South, total thirteen days. The total rainfall was 5.65in, this fell on twenty-nine days, and is 2.57in above the average for the month. This is the greatest amount recorded for one month since October, 1892, and the greatest number of rainy days recorded here for one month; details previous to 1877 are missing. Barometer (corrected and reduced): Highest reading, 30.078in on the 18th, at 9 p.m.; lowest reading, 28.947in on the 12th at 9 p.m. Thermometer: Highest in the shade, 64deg on the 1st and 3rd; lowest, 33deg on the 24th; mean of daily maxima, 56.45deg; mean of daily minima, 44.67deg; mean temperature of the month, 50.56deg; lowest on the grass, 31deg on the 24th; highest in the sun, 116deg on the 3rd; mean temperature of the earth at 3ft, 52.80deg. All the mean temperatures are considerably above the average. Total sunshine, 92 hours 50 minutes, which is nearly two hours above the average for the month; there were four sunless days. There has been no frost here this autumn to destroy tender plants, and Dahlias, Heliotrope, and others are now (November 3) full of flowers outdoors.—W. H. DIVERS.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
November.										
Sunday ... 1	W.S.W.	deg. 52.1	deg. 49.8	deg. 58.9	deg. 41.7	Ins. —	deg. 51.0	deg. 52.3	deg. 54.4	deg. 40.0
Monday ... 2	S.S.W.	49.7	48.5	55.1	39.5	0.24	51.2	52.6	54.2	30.5
Tuesday ... 3	N.W.	51.4	48.5	54.1	48.7	—	52.0	52.6	54.1	48.4
Wed'sday ... 4	N.W.	38.6	33.4	53.3	34.3	—	50.2	52.7	54.0	26.5
Thursday ... 5	N.E.	43.9	43.5	51.6	37.0	—	48.6	52.1	53.9	29.2
Friday ... 6	N.E.	48.4	46.0	53.3	43.2	—	48.9	51.5	53.8	31.5
Saturday ... 7	S.E.	37.0	36.4	48.8	31.3	—	47.9	51.3	53.6	27.2
MEANS ...		45.9	44.4	53.7	39.4	Total. 0.24	50.0	52.2	54.0	33.3

Except for some rain on the 2nd inst., the weather has been dry but dull, with more or less fog on three days.

		deg.	deg.	deg.	deg.	Ins.	deg.	deg.	deg.	deg.
Sunday ... 8	S.S.E.	45.7	43.4	52.3	35.3	0.05	47.2	50.7	53.3	26.5
Monday ... 9	S.W.	51.6	50.8	55.8	32.7	0.04	46.9	50.3	53.1	26.0
Tuesday ... 10	S.W.	44.9	43.4	55.3	37.8	—	46.9	50.1	52.9	28.5
Wed'sday ... 11	W.N.W.	51.7	50.0	53.3	44.7	0.02	48.4	50.0	52.7	41.8
Thursday ... 12	W.S.W.	48.0	47.1	53.3	42.3	0.05	49.0	50.3	52.5	32.2
Friday ... 13	W.S.W.	52.7	51.2	53.8	48.0	0.01	49.9	50.5	52.3	48.3
Saturday ... 14	S.E.	51.7	50.8	55.2	48.2	0.05	50.2	50.8	52.3	38.9
MEANS ...		49.5	48.1	54.1	41.3	Total. 0.22	48.4	50.4	52.7	34.6

Damp, misty weather has been the feature of the past week, with small quantities of rain on six days.

Weather, Roses, and Bees at Newton Mearns, N.B.

Since I wrote a fortnight ago the weather has not improved. The last week of October gave us an additional figure to the month's rainfall. From figures kindly supplied to me by my

good friend Mr. Lyon, of The Gardens, Pollok Castle, I learn that the rainfall for October was 10.54½in, which seems to me to be an extraordinary fall. I also learned that the largest falls were registered on the 5th (0.89), 7th (1.15) 15th (0.58), 16th (0.50), 17th (0.34), 25th (0.53½), and 28th (0.56½in) respectively. There were only two dry days in the month, viz., 10th and 18th. With the approach of November, it was hoped that a change would set in, but so far no improvement, sunshine and rain alternately. The harvest now is a word of the past, although there is yet a considerable amount of grain out in the fields, but what is it like? Rubbish. It will possibly do for manure. Although the farmers here have felt a little loss, yet away further North I learn that losses to the extent of thousands of pounds have been caused. Not for many years has such a time been experienced.

The gardens and fields are still looking fresh, but the leaves are now well off the trees. The ground, however, is "water-logged," and any alteration to be made now will require to be delayed. Roses that were ordered have arrived from the nursery, but it will be some time yet before planting can be commenced. There are still a good few Rose blooms in the garden: Hayward, Gén. Jacqueminot, Helen Keller, and Piganeau are specially fine; while Testout, Grant, Grolez, and Antoine Rivoire are exceptionally pretty for the time of year. Rivoire is under glass globes, which is the only way a good bloom can be secured in damp weather. The same remarks apply to Bessie Brown. A look round the apiary on Saturday last satisfied us that stores were plentiful, and with the protection of rainproof covers the bees should winter well.—N. R., November 14, 1903.



The Agricultural Census of 1901.

We should perhaps, say, the census from an agricultural standpoint. We are now in a position to know exactly how we stand in respect to the numbers of the employed as against this time fifty years ago. We have felt the difficulties of the labour question, and we have seen on every hand what a lack there has been of suitable workmen. At the present time the labour question is, to many of us, of vital importance, and we do not know where to turn to find hands to get us through the press of work before the severe weather stops all but the most urgent work on the land. With the increased demand come larger wages, and just at a time when the farmer can ill afford an extra halfpenny. Women are eagerly sought after, and we cannot but think that 2s. for a day beginning at 9 a.m. and lasting till 4, is a good wage. Indeed, to-day we saw women well on towards their homes at 4.10. Boys and girls just out of school ask, and get, 1s. 8d.; and still at these wages both women and young folks are scarce. Many Irishmen come over for the two harvests, that of corn and Potatoes; but the season has been so delayed that they will stay with us no longer, and are off in flights like the swallows.

Mr. Druce, of the Farmers' Club, has brought together some figures that he finds in the census returns, and which show clearly how we stand. He takes fifty years, and we see how the population, as a whole, has increased, and in some sections the increase has been very little; in others there is but a decrease to record. In 1851, out of a total population of eighteen millions, two millions were of the agricultural class. In 1901, out of a population of 32½ millions, rather more than one million are agriculturists; or, to put it very plainly, that all may comprehend—In 1851, one person out of every nine was employed in agriculture, as against one person in thirty-two in 1901. The number of labourers has diminished even more, for in 1851 we find 1,250,000, as against 609,000 in 1901, less than half!

Now this shortage cannot all be accounted for by the introduction of machinery and the turning of arable land to grass! From 1891 to 1901, the agricultural population has decreased 15½ per cent. The urban districts have increased 15½, and the rural districts have increased three per cent.

(N.B.—The rural and agricultural population must not be confounded: they are not one and the same thing, for the country is the retreat of (1) those out of business, (2) of those who go to and from their work, (3) of miners and other workers that are not of the agricultural class at all.

The number of farmers proper have fluctuated a good deal during the fifty years. In 1861—71, their numbers increased as compared with '51; they went down in '81 and '91, touching their lowest point in '91, and they have risen again in '01. This, and the fact that we find so many relatives of farmers as assistants, points to the fact that many of these farmers are holding lessened areas, and are employing relatives rather than outside help, i.e., they are doing the work within themselves, and forming a class of men who are, perhaps, the most hard-working of any community. Probably in many instances the farms are their own, and it is only by the means above indicated that they are able to keep their heads above water. We know many instances of sons and daughters working for nominal wages, or perhaps, barely more than their keep, just because they have honest pride enough to wish to keep the bit of land intact. Farm bailiffs are on the increase during the last ten years. The name "farm bailiff" reads differently in various neighbourhoods. "Farm Bailiff" proper, ranks rather above a "foreman," and the name implies a superior class of men who are managing land under the landlord, rather than the tenant, and this would suggest that landlords have a good deal of land in their own hands at present. We hardly think this is the case; certainly not in the north of England.

Mr. Druce thinks the drop of 22 per cent. of labourers and shepherds during the last ten years may be accounted for by the fact that the census was taken during the period when we had so many men (reservists) out with the forces in South Africa. We do not think that would affect shepherds. We do think that on many farms, from motives of economy, the foreman and shepherd are combined in one person. The percentage of arable laid down to pasture during the like period (ten years) has been six per cent. The tendency of making small farms or letting farms to men in a lower grade of life than formerly all tends to the lessening of the demand for labourers. These men have to keep down expenses to the lowest point, and to do so they first cut off superfluous labour (or what they think superfluous), and then cut off all the manurial agents they dare. There is very little intensive farming: now the farms are run more on the American system, and are all for utility as against beauty and mere neatness. We are sorry for this, for the neat picturesqueness of an English farmer is very pleasant to the eye, and it is what strikes a foreigner so forcibly. We have sometimes been inclined to think certain "faddy" men have run up their labour bill too much. They could still have had things well done had they paid more attention to details themselves; insisted on more punctual arrivals in the morning, and not overlooked early departures. There is much more time and money lost in this way than can be easily calculated. Such irregularities are not for one moment allowed in factories or mills: it is only the easy-going farmer who gets victimised, and he has but himself to blame for much of it.

We see the farmer is blamed for his apathy in not giving more attention to the higher branches of dairy work. The better class of cheeses—for instance, those that we find at the good hotel or the fashionable club. The irony is that we let the foreigner seize and hold this market, and we hardly see how it can be otherwise till this question of agricultural population rights itself a little. Cows may be fed and milked, and the milk despatched to some great centre, and in this we see the minimum of labour with the maximum of profit: but it comes about that if the farmer wishes to convert this milk into cheese he is brought face to face with a great difficulty. Unless his own family will undertake the work, it must go undone. True, the rush of work is during the summer months alone; but it matters little when it is, if he can get no one to do it. We know ourselves of a case where all the summer milk was turned into most excellent Stilton, but this was only because the mistress worked like a slave herself, being in her dairy daily by 6 a.m., if not earlier. She could get no servants to help, and, by-and-bye, had to give it up, the strain being too much, taken in connection with her other household duties. Why cannot some of those young women who flock into towns and make indifferent dressmakers and badly paid shop assistants turn their hand and attention to this industry? But they won't, preferring anything to a country

life. It is a sort of madness we cannot understand, and we fear it is growing.

We have seen this year, for the first time during a long life, the meets of various hounds postponed, not on account of the frost, but because the ground was too wet for sport, and there was imminent danger of harming the crops. This gives some idea of the universal deluge, a deluge unequalled certainly during the lifetime of this generation. Shall we need to say a word in favour of the farmer? Do all that "ride to hounds" choose their road as carefully as possible? We have had occasion to remark that on soft land a horse's foot does positive harm in beating and solidifying, and this on bare fallows; but must the harm be on fields of freshly sown Wheat or over young seeds? It is not one solitary horseman, but the "fields" of to-day are so immense, and, we fear, many of them come only for a gallop. There are acres of Mangolds yet unpulled, and though the Mangold is hardier than of yore, it is not improved by a great piece being punched out of its side by an iron shoe. If men would only believe it, "the going" is much easier on the headland, and the damage done far less. We hear a whisper that the fair sex is the most to blame, and if so, we fear that these words of ours won't meet the eyes of the chief delinquent.

As to fences, and the damage done to them (if we dare make the suggestion), a few hand gates might do much to obviate this difficulty. Need we say that we hope all strands of dangerous wire are now removed from along the tops of the fences? On whom this duty and expense falls is still a debated question; but we think that as hunting is the sport of rich men, and the present-day farmer is a poor man, the expense should come out of the hunt fund. We were amused the other day by the statement that fox-hunting was the cause of the decadence of poultry rearing, and the reason of our great lack of eggs! "Credat Judæus." If there is a real and true desire to keep poultry, foxes will prove no bar. We whisper it, but we believe the fact implicitly, that foxes are often blamed for the destruction of poultry that is yet to be hatched!

Work on the Home Farm.

Although we have had very little rain since our last, the land has not dried much. We have had three nights' frost, rising from three degrees of frost to eight, and though it added to the anxiety of Potato growers with crops still unlifted, it would probably do considerable good. Wet pastures will now be safer to run sheep on as regards the danger from liver fluke, though the animals will be better on sounder land until after Christmas if it can be managed.

We notice a few Potato pies being soiled up. We hope there may not be many bad ones, or the closing-up now may be impolitic. No doubt the frost has given a warning note, but we seldom have frosts so early which are severe enough to go through a good covering of straw batts. Hands are too scarce at present to allow of turning the crops over and taking the bad out.

We hear of fifteen tons of Evergood per acre being grown, and a portion being sold at £9 per ton. This is an eight-acre field. We also hear of three bad Northern Stars at one root, and of a purchased 2lb lot containing one very bad one. These are facts we can vouch for.

We are Wheat sowing, but it is very heavy work for the horses in the drill, which we prefer to use if possible. Some farmers are thinly ploughing their seed Wheat in after Potatoes, but they must be leaving many Potatoes beneath which a deeper ploughing would have recovered.

A neighbour is taking Carrots up—a fine crop, which he sold at £26 per acre. Carrots were such a drug last year that very few people have grown any; consequently they are now selling very well. Next year it will be a case of enter Carrots, exit Potatoes.

We shall defer ploughing fallows down for winter until the water has had greater chance to drain away, and shall find occupation for the horses in carting manure on to the seeds. There will also be some work in delivering Barley to the railway. Winnowing, or screening the corn, is occupying the time of some of the hands. This is work that must not be slipped, if we are to keep a good name with the buyers on the market. A "small" farmer showed us the other day a delivery order for some Barley which he had received from the purchaser. "Please dress well," was heavily underlined. That Barley was weighed at the machine tail, and never dressed at all.

Cattle are all up and on strictly winter keep. Roots are good, but hardly ripe enough. The cattle, however, seem to thrive, which is, so far, satisfactory. We shall have to procure a supply of poles and stakes, as the time for repairing fences is near at hand.

PLANTING SEASON



PAULS' ROYAL NURSERIES

WALTHAM CROSS, HERTS.

12 miles from London. South Entrance four minutes' walk from Waltham Cross Station; West Entrance three minutes' walk from Theobald's Grove; both Stations on the Great Eastern Railway.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Gold Medals in 1903 from Royal Horticultural and Royal Botanic Societies.

FRUIT TREES for the Orchard, Garden, and Forcing House. Hogg Memorial Medal, 1901.

HARDY TREES for Streets, Parks, and General Planting. Silver Medal from Royal Agricultural Society of England.

SHRUBS, both Evergreen and Deciduous.

CLIMBING PLANTS, Hardy and Greenhouse.

RHODODENDRONS, CAMELLIAS, & AZALEAS.

HERBACEOUS PLANTS in great variety.

BULBS and SEEDS, and all Garden Sundries.

PRICE LISTS ON APPLICATION. INSPECTION INVITED.
Upwards of 1000 Medals, Prizes, and other Awards at leading Exhibitions during the past 42 years.

SOLE POSTAL ADDRESS—

WM. PAUL & SON,
WALTHAM CROSS, HERTS.

Rose Growers by Appointment to His Majesty the King.

CHERRIES—A SPECIALITY!

Awarded Silver Banksian and Silver Gilt Knightian Medals for Collections by R.H.S.

Our collection is complete (over 50 varieties). Thousands to select from, very strong and well rooted. Standards from 12/-, 15/-, 18/- doz.; Dwarf Maidens, three and more shoots, 9/-, 12/- doz.; Dwarf Trained, 2/-, 2/6 and 3/6 each; Dwarfs, two-year heads, suitable for pyramids, 10/-, 12/- and 18/- doz.

LIST FREE ON APPLICATION.

W. RAY & CO., Nurserymen, TEYNHAM, KENT

GRAPE VINES in POTS

Extra Strong Fruiting and Planting Canes
in all Leading Varieties.

FIGS IN POTS

All Leading Sorts.

Bushes and Fan-trained for Walls.

DICKSONS Nurseries CHESTER

1500,000 BULBS.

Spanish Iris, Yellow, White, and Blue 7/6 per 1000.
Crocus, all colors 5/6 per 1000.
Sir Watkin Narcissus 5/6 per 100.
Horsefieldii 5/6 per 100.
Trumpet Narcissus 7/6 per 1000.
Glory of Leiden Narcissus 6d. each.
Madam de Graaff 3/6 each.
Sweet Scented Pheasant Eye Narcissus 5/6 & 7/6 per 1000.
Mixed Narcissus 5/6 per 1000.
Double Daffodils 5/6 & 10/6 per 1000.
Tulips, Mixed (choice) 2/6 per 100.
Single Lent Lilies 3/6 per 1000.
Snowdrops 5/6 & 7/6 per 1000.
Strawberry Plants 1/6 per 100.

SEND FOR LISTS BEFORE
ORDERING ELSEWHERE.

Cross & Son, Daffodil Nurseries, Wisbech.

CLIBRANS
SELECTED TREES.

For Avenue, Street, Park,
or Cemetery Planting.

FOR immediate effect; all are grown singly, regularly transplanted, and thoroughly well-rooted, ensuring safe removal to any situation.

	Feet.	Each.	Dozen.
Acer , <i>Dasyacarpum</i> ..	8 to 10 ..	2/6 & 3/6 ..	24/- & 36/-
„ <i>Schwedleri</i> ..	8 to 10 ..	2/6 ..	24/-
Acacia (<i>Robinia</i>), Common ..	5 to 6 ..	8d. ..	7/-
„ „ „	6 to 8 ..	1/6 ..	12/-
„ „ „	8 to 10 ..	2/- ..	18/-
„ <i>Inermis</i> (Mop-Headed) Standards ..	5 to 7 ..	2/6 ..	24/-
Ash (<i>Fraxinus</i>), in variety ..	6 to 9 ..	2/6 ..	24/-
„ Common ..	8 to 10 ..	2/6 ..	24/-
„ „ „	10 to 12 ..	3/6 ..	36/-
„ Mountain ..	8 to 10 ..	2/6 ..	24/-
„ „ „	10 to 12 ..	3/6 ..	36/-
Beech (<i>Fagus</i>), Common ..	8 to 10 ..	2/6 ..	24/-
„ „ „	10 to 12 ..	3/6 ..	36/-
„ Purple ..	8 to 10 ..	3/6 & 5/- ..	—
„ „ „	10 to 12 ..	5/- to 10/6 ..	—
Birch (<i>Betula</i>), Silver ..	8 to 10 ..	2/- ..	18/-
„ Weeping ..	10 to 12 ..	2/6 to 3/6 ..	—
„ <i>lacinata pendula</i> (Cut-leaved) ..	8 to 10 ..	3/6 ..	—
„ „ „	10 to 12 ..	5/- ..	—
Cherry , Double Flowering Standards ..	6 to 8 ..	3/6 ..	36/-
Chestnut , Horse ..	8 to 10 ..	2/- ..	18/-
„ „ „	10 to 12 ..	3/6 ..	36/-
„ <i>rubicunda</i> (Scarlet) ..	8 to 10 ..	3/6 & 5/- ..	36/- to 42/-
„ Double White ..	8 to 10 ..	5/- to 7/6 ..	—
„ Spanish (<i>Castanea vesca</i>) ..	7 to 9 ..	3/6 ..	36/-
Elm , English (<i>Ulmus Campestris</i>), from buds and grafts; of handsome erect growth ..	8 to 10 ..	3/6 ..	—
„ „ „	8 to 10 ..	2/6 ..	24/-
„ Wych (or Scotch) ..	10 to 12 ..	3/6 ..	36/-
„ „ „	8 to 10 ..	2/6 ..	—
„ Dovasi ..	10 to 12 ..	3/6 ..	—
„ „ „	8 to 10 ..	2/6 ..	—
„ Giant Canadian or Huntingdon, from buds and grafts ..	8 to 10 ..	3/6 ..	36/-
„ „ „	10 to 12 ..	5/- ..	50/-
„ Louise Van Houtte, golden foliage ..	7 to 8 ..	2/6 ..	24/-
„ „ „	8 to 10 ..	3/6 ..	36/-
Laburnum , English ..	8 to 10 ..	2/6 ..	24/-
„ „ „	10 to 12 ..	3/6 ..	—
„ Scotch ..	7 to 8 ..	1/6 ..	—
Lime (<i>Tilia</i>) ..	8 to 10 ..	3/6 ..	36/-
„ „ „	10 to 12 ..	3/6 to 7/6 ..	36/- to 75/-
„ Larger, extra fine specimens, 10/6 and 12/6 ..	—	—	—
Maple (<i>Norway</i>) ..	8 to 10 ..	2/- ..	18/-
„ „ „	10 to 12 ..	3/6 ..	36/-
„ „ „	12 to 14 ..	5/- ..	55/-
Plane (<i>Platanus acerifolia</i>), an excellent tree for smoky districts ..	8 to 10 ..	3/- ..	30/-
„ „ „	10 to 12 ..	5/- ..	—
„ extra specimens, 7/6 to 21/- each ..	—	—	—
Poplar (<i>Populus</i>) ..	—	—	—
„ <i>Argentea</i> ..	8 to 10 ..	2/6 ..	—
„ „ „	14 to 16 ..	5/- ..	50/-
„ <i>canadensis nova</i> ..	10 to 12 ..	2/- ..	—
„ „ „	12 to 14 ..	3/6 ..	—
„ Lombardy ..	10 to 12 ..	2/- ..	18/-
„ „ „	12 to 14 ..	3/- ..	30/-
„ „ „	14 to 16 ..	4/- ..	40/-
Prunus <i>Pissardii</i> (Purple-leaved Plum) ..	6 to 8 ..	2/- ..	18/-
Sycamore ..	10 to 12 ..	2/6 ..	24/-
„ „ „	12 to 14 ..	3/6 to 5/- ..	36/- to 50/-

SEND FOR CATALOGUE,

GRATIS AND POST FREE.

ALTRINCHAM & MANCHESTER



Journal of Horticulture.

THURSDAY, NOVEMBER 26, 1903.

British versus Foreign Apples.

WE in this country are fortunate in being able to get large supplies of Apples from foreign lands to augment our own crops. Even in plentiful seasons we could not do without them, and in years like the present, when our own crop is almost a failure, we have reason to be thankful for the huge consignments of brightly coloured samples which come to us from Canada and the United States. This much is admitted by the majority of fair-minded individuals. Still, it behoves us all to do what we can to aid Britain in supplying a much larger share of her own requirements.

In this connection there is one point which needs to be constantly kept to the front—viz., the superiority of well-grown British samples in regard to *flavour*. How is it that we are continually seeing paragraphs in the press asserting that the Apples grown in this or that county are the finest in the world? The statement is a most misleading one, and will not survive a critical test. It is generally admitted that foreign Apples are, as a rule, brighter in colour than those grown in this country, and the average samples are usually larger; but they gain these advantages entirely at the expense of *flavour*. No matter whether we take the cooking or dessert kinds, there is a great advantage on the side of the home grown article. One cannot understand anyone preferring the foreign samples when cooked to the best English kinds, nor the dessert ones when compared with Cox's Orange Pippin, Ribston Pippin, and Blenheim; and when that fine new variety, The Houblon, gets more plentiful, it will probably make as great a name as the three previously enumerated have done.

Those who know what good Apples are will invariably select the best British kinds in

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

preference to the best from other lands. It is necessary, however, to educate the masses of our countrymen in regard to what are the best flavoured kind, as far too many make their purchases by appearance alone.

Although we have had a particularly unfavourable year for Apples in those places where cultivators have been fortunate in securing a crop, the fruit has been good, with the exception of colour, which has been more deficient than usual. In favourable seasons, however, there is not much fault to be found with the colour of British Apples. Where the best varieties are grown, and good attention given, many growers who have taken up fruit growing in a serious way, treat their trees well, and pay the necessary attention to packing and grading the fruit, but there is yet much to be done to induce the majority of cultivators to do these things. Those who have produced good samples this year have had very little difficulty in disposing of them without sending to the open market. The rubbish in the markets is the produce of rough-and-ready growers, and therefore is seen at a great disadvantage when compared with the good foreign samples. It is simply a case of comparing our *worst* with the foreign *best*; but when Britain shows her best she is not behind in appearance, and is infinitely ahead in the chief point—flavour. It is, therefore, not very wide of the mark to say that the British Apples are the *best* in the world.—G. C.

Hydrocyanic Acid Gas Fumigation.

Some useful pointers on the use and effects of this recently suggested gas for fumigation purposes, have been given in the "Florists' Exchange," a New York paper. The gas has been, and doubtless is now, to a small extent, used in conservatories and fruit houses in Great Britain and Ireland, and the *Journal of Horticulture* described the methods of operation, the materials and quantities used, when reviewing Professor Johnston's book on "Fumigation Methods," page 379, May 1, 1901. We print two of the letters from our American contemporary:—

No. 1.—"I used one gallon earthen jars for the work, and only one jar to every 3,000 cubic feet. The jars were filled with one quart of water, one quart of sulphuric acid, and placed in the paths at different parts of the houses. Next I laid a stick across the path, above the jars, having it rest on the benches, thus being about 3ft from the ground. The cyanide of potassium was put up in 5-oz. packages (exact weight); these packages were tied on strings sufficiently long to reach the next jar, and when all were ready I again went to the further one, opened the package a little on one end, hung it on the stick just above the jar, and let it down, after I had reached the end of the string, and so on until all the packages had been dropped. Of course, the dropping of the cyanide of potassium must be done quickly, as the fumes are very dangerous to man and beast. The doors and ventilators must be closed tight. The fumigation was done at six o'clock at night, and the ventilators were opened at seven o'clock the next morning. The white flies were all dead, but I noticed a few mealy bugs, which were not hurt at all.

"The houses contained the following plants: *Asparagus plumosus* and *Sprengeri*, *Acalyphas*, *Lantanas*, *Rex* and flowering *Begonias*, *Coleus*, *Latania borbonica*, *Kentias*, twelve varieties of Ferns (including the Boston, Sword and Maidenhair), *Marantas*, *Selaginellas*, *Hibiscus*, *Heliotrope*, *Cissus discolor*, *Impatiens Sultani*, *Oranges*, *Fuchsias*, *Abutilons*, &c. The Sword Ferns were planted on the bench. The path is very narrow, so that the fumes from one jar came directly up against some of the leaves which were overhanging. The tips of the leaves were very slightly hurt, but 3ft from the jar there were no signs of any damage whatever. The *Asparagus plumosus* were in 3in and 4in pots, and were very close to another jar. These plants were hurt a very little also; but the damage done was so small that a week afterward we could not notice it. The remainder of the plants came out without the slightest injury. There is no doubt but that many plants will stand a stronger fumigation, and I hope that we shall hear more of it in the future, as I think it is a very valuable remedy. My first experiment was an entire failure, as the cyanide of potassium I received from our local drug store did not have any strength, and must have been old stock."

No. 2.—"In the first place, I should strongly recommend all those who are intending using the gas to study the subject thoroughly first. The old adage, 'A little knowledge is a dangerous thing,' is especially true in regard to this method of fumigation. I should advise your inquirers to purchase Professor Johnston's book on 'Fumigation Methods' (Orange Judd Co., New York, 3s. 6d.), wherein there is a lucid description of the gas fumigation, and study it well before attempting to use the gas on a large scale. An incomplete knowledge of the subject once caused me to ruin a house of Violets. I thought I had studied the subject thoroughly, but forgot the simple precaution

of waiting until night before I generated the gas. Regarding the fumigation of a vinery, last winter I successfully fumigated one, with no apparent ill effects to the Vines. The operation was done in winter, when the Vines had been cleaned and were perfectly dormant. The quantity of cyanide of potassium used was the same as recommended for Violets—0.15 gram per cubic foot. The house was kept closed for half an hour. On examination the next day all the mealy bugs visible were dead, but this did not rid the vinery entirely of the pest. I fancy the gas has no effect on the eggs of these insects, so fumigating with the gas only kills the adults; and if this method were resorted to to entirely rid a vinery of the pest it would require several fumigations, at different times, to thoroughly eradicate the insect. I also had experience last winter in fumigating a Peach house for San Jose scale, with dire results both to the scale and the fruit crop. The quantities used were the same as for the vinery, and fumigation was done in December. Twenty minutes was allowed for the gas to act. On examination next morning one or two fat mealy bugs were located on the trees, appearing as if nothing had happened. I was not prepared for the results which followed this fumigation. When the house was started up in the usual way, and with the usual treatment, neither fruit nor shoot buds developed naturally. They seemed to have been retarded about six or eight weeks; most of the fruit buds dropped as the flowers opened. What flowers remained on and expanded fully could not be fertilised, even by hand. Not one tree in the house could be induced to set fruit. The whole thing would have been a miserable failure, but for the fact that the San Jose scale was entirely checked, and on examination of the house to-day—ten months since the fumigation—no trace of the scale is to be seen.

"This experience with the Peach house has puzzled me very much. The very fact that some live mealy bugs were discovered the morning after fumigation would show that there was not an overdose of the gas. The buds were perfectly dormant, as the operation was done only a few days after the last leaves had fallen. The house contains both Peach and Nectarine trees, and if anything the Nectarines suffered the most. One tree of Early Rivers took about six months to recover and get a decent growth. I am of opinion that much more experimenting has to be done before the hydrocyanic acid gas may be safely recommended for general use."

Trans-Atlantic Echoes.

At the monthly meeting of the Rhode Island Horticultural Society, held on October 21, at Providence, R.I., the principal event of the evening was an address by J. H. Hale, president of the American Pomological Society. He spoke in part as follows, and following the above leader, his words will have treble significance to British cultivators. Let patriotism stir us to action.

"In the old days of this country our forefathers brought fruit seeds from England and planted them, and from the result of this planting other trees were obtained, until gradually the number of trees grew very large. The object of this planting was primarily to get something to drink—to supply the cider barrel—and the bounties paid for the propagation and improvement of fruit were entirely with this end in view. From this growing for the cider barrel entirely extended the small fruit gardens for family supply. It is only within the last half-century that commercial fruit growing has been taken up in New England, and it is still only a side issue in the majority of cases. The average land owner of New England and of Rhode Island has failed to grasp the opportunities existing in this section of the country.

"Here in New England we have the finest markets in the world right at our doors. We are right on the Atlantic coast, and have the best facilities of any location in the world for supplying the great English market. Practically all the fruit used in London and vicinity has to be imported, and New England is the nearest available point where this fruit can be grown. To carry on horticulture successfully it is necessary to follow out all its branches in a scientific way. In the first place it is necessary to trim the trees in order that the fruit shall reach its highest state of perfection. Then care should be used in harvesting the fruit, and it should not be picked until it has reached its highest state of perfection. It should be carefully graded and sorted into sizes, and should be placed in the most attractive packages possible, and should be always sold in good weight. We have been using too large packages for our fruit, and the next thing to do is to adopt the family package, so that the fruit goes directly to the consumer without the package being broken by the middleman. With the extension of the electric car service through the rural districts the facilities for the delivery of fruit have been largely increased, and when we get the parcel post, which is sure to come in time, they will be still further increased. The land in New England is cheap, the opportunities are all here, and it only waits for the enterprising man or woman to take advantage of them."

**Cypripedium Godefroyæ leucochilum.**

The section of Cypripediums to which this, and bellatulum, niveum, concolor and others belong, displays some of the choicest flowers in the genus. They agree in requiring special treatment—an intermediate temperature, a compost of broken pieces of lime rubble and tufa stone, and plenty of daylight. It is therefore necessary to have them near to the glass. Place them on a shelf at end of an intermediate or warm house, away from the possibility of draughts. They are best kept almost perfectly dry all winter, but must have an abundant water supply when in growth. A genial, circulating air around them is desirable. They may be grown in hanging pots. *C. Godefroyæ* is a natural hybrid from Siam, the parents being *niveum* and *bellatulum*. Its variety (which we figure) differs in having an unspotted lip, the hybrid type being purple-spotted on lip and segments, over white. They flower during the early part of summer. Anyone desirous of more exact cultural hints with regard to the section must watch the calendarial notes weekly, and on page 347 of our issue for October 15, 1903, there appeared a note taken from the "Orchid Review," which explained the methods practised so successfully for *C. niveum* by Mr. Mackay, grower to Mr. Chamberlain at Highbury.

Cypripedium insigne in Small Pots.

Speaking of plants, he has seen flowering freely in small pots. "E. M." p. 458, notes how useful they are, and I can thoroughly agree with him. It is a wonder that such plants are not more commonly grown, as they are certainly much more profitable than the large, ungainly, and often unhealthy specimens. What "E. M." does not appear to have noticed, however, is the fact that the plants, with their roots crowded tightly together in small pots, are really the most free flowering. It is quite a mistake to allow this old and useful plant too much pot room, as this causes a free growth, but few flowers. The same thing applies to all the varieties of *C. insigne*, as well as *C. Leeannum*, and other of the hybrids having *C. insigne* as one parent.—H. R. R.

The Week's Notes—"Firing" and Ventilating.

Mismanagement of the heating apparatus has a good deal to answer for in producing a dry, unhealthy heat in the houses, leading to insect attacks and general ill health of the plants. Just now we frequently have fine mornings following very cold nights, and the inexperienced stoker, on finding the temperature somewhat low in early morning, fires up rapidly, so that by the time the sun is shining on the houses the pipes have become very hot. Owing to the large amount of fuel in the boiler, it is quite impossible to cool the pipes, and a waste of fuel is added to the injurious dry heat. Under the circumstances named it is better to fire sharply, but keep a thin fire, so that when the sun reaches the house the dampers may be closed and a little ashes and small coke or coal put on to keep the fire alight until more heat is again required in the afternoon. In dull weather, of course, a certain amount of fire heat is needed all day; and with a chink of top and bottom air, will keep the atmosphere moving, and therefore constantly changing. The temperatures of the different compartments, of course, will vary according to the plants grown therein, but the above precaution is necessary in every case. Sometimes, in spite of all care, the houses get overheated, the sun suddenly appearing after an hour or two of cloudy skies.

Too often it is the custom in this case to run to the ventilators and open them widely to lower the temperature. This is quite wrong, and causes much injury to delicate plants. Instead, the house should be freely damped and only a moderate amount of air admitted. The temperature then gradually rights itself, and no sudden changes take place. Remember, too, that in the majority of cases Orchids are now at rest or approaching that condition, and fire heat sharply applied is harmful to them. Better by far let the house fall a few degrees when the mornings are very cold than press in a lot of fire heat. Covering the glass at night is a great help in maintaining a regular temperature; but the covering should be something easily removed.

When the ordinary summer blinds are run down at night in frosty weather they sometimes stick fast, and the light is kept out of the house until the ropes and pulleys thaw and are again workable. For the cool house especially a covering of dry garden mats is excellent, preventing radiation of heat from the glass and saving fuel. In this department especially a constant supply of fresh air is absolutely essential to the health of the inmates, and, whenever possible, the upper ventilators must be slightly opened. The wooden shutters in the walls (when provided) should never be entirely closed night or day, but a chink may be left on both in the warm and cool houses.—H. R. R.

Hardy Plant Notes.**Crocus Scharojani.**

Crocus Scharojani is the first to bloom in autumn. It has recently reappeared from Armenia. It was first discovered in 1865, at a height of about 7,000ft. in the Caucasus, by Herr Scharojan, and was first flowered by the late Colonel Trevor-Clarke, of Welton Place, Daventry, in 1879. The following year it was flowered by Mr. George Maw, who figured and described it. It begins to bloom in the end of July and beginning of August, and those who appreciate the glorious display made by the Dutch Yellow Crocus of spring can well imagine how valuable this species may become to the flower garden in autumn. The colour is a bright orange.

The species often sold for it are *C. Olivieri* or *C. suterianus*. It has found its way into my garden, and I hope to have more to say about it again.—S. A.

Bulbocodium vernum.

Rich as is the wealth of bloom given by the species and varieties of Crocus in the early months of the year, most of us can yet find a welcome for other bulbous plants, even if of somewhat similar appearance when in flower. One of the most pleasing of these is *Bulbocodium vernum*, which is also recommendable because of its shade of colour being unlike that of any of the Crocuses or other bulbous plants of the spring. It is also one of the very early flowers, and comes in frequently in the month of February to delight us with its pretty six-parted flowers of an attractive shade of a warm lilac, followed afterwards by its broadish leaves. The ease with which it can be grown is greatly in its favour, as it is perfectly hardy, and only requires to be planted in good soil, with the crowns of the corms about two inches beneath the surface of the soil. It prefers a good and rather heavy soil. Although it resembles the Colchicums and belongs to the same natural order, the Liliaceæ, and the same sub-order, that of the Colchicaceæ, Mr. Baker classes it with the tribe Uvulariæ, instead of including it with the Colchicæ, and it is more nearly allied to the Merenderas. Like many other

**Cypripedium Godefroyæ leucochilum.**

early flowers, it rises little above the soil, and is thus not liable to much injury from the weather, and a good clump or a mass is very pleasing in the early months, especially when associated with the Snowdrop, the Scillas, and such a flower as *Eranthis cilicicus*, which blooms later than the more plentiful *Eranthis hyemalis*. Those who like plants with variegated leaves will find the variegated-leaved form of *B. vernum* an acquisition, if they do not possess it already. Its flowers are prettily marked with creamy white and tinged with pink. It is a little dearer than the other, but is as hardy. These *Bulbocodiums* should be planted as soon as possible, and it will be necessary to watch for slugs just before they are coming into bloom. These pests are very fond of the blooms of the *Bulbocodium* from their earliest stages, and more than once the writer has been disappointed of the flowers by the ravages of such vermin.—S. ARNOTT.



New Varieties.

For the benefit of those who have not the opportunity of inspecting the novelties as they appear, I am following my yearly practice for the benefit of Journal readers, so that cultivators, when reorganising their lists, as they annually must do, may have an up-to-date collection.

MARIE DU CROS is a decided acquisition to the already long list of Japanese varieties. The blooms are fully 9in in diameter, and are well "built" up in the centre, forming a perfect, yet huge blossom. The broad flat florets have a gentle droop. The point of each slightly curls upwards as they unfold. The colour is distinct and attractive, pale straw on the outer portion, gradually deepening to soft yellow in the centre. This variety originated from the same seed pod as Miss Mildred Ware, itself rosy cerise, which is a distinct proof of how difficult it is to control colour when raising new varieties, even in the Japanese section.

MRS. J. DUNN belongs to the white flowered section of Japanese, and although they are so numerous, this variety is quite distinct. The most simple description would be to term it a white F. S. Vallis, so like that sterling variety is it in formation. The blooms are 7in deep and 8in in diameter, the centre thoroughly filled up, forming a handsome, full, rounded bloom. I do not remember the time when I was so impressed with two varieties as these, which are in the hands of Mr. Jones, of Lewisham, for distribution. The latter is a seedling raised by Mr. Carpenter; in height it grows 5ft, with thick, leathery leaves, and is a distinct rust-resister, which is a strong point in its favour.

MRS. J. HADAWAY is a sport from Miss Mildred Ware. The blooms are fully 10in in diameter, and 6in deep. The colour is striking—pale yellow and fawn, with a faint rose suffusion.

BRIGHTNESS was well shown by Mr. Vallis at Plymouth, and is quite an acquisition to the bright coloured varieties. The blooms are quite 8in in diameter, closely built in the centre. The flat florets are of medium width, curling at the tip. The colour is a bright terra cotta with suffusion of yellow and a gold reverse.

MADAME HENRI DOUILLET reminds one much of Mrs. Mileham in formation; in colour it is a deeper rose.

JEAN CALVAT has narrow florets curling at the tip. The colour is striking—a rich red terra cotta with a golden bronze reverse.

SIR W. ACLAND has narrow reflexing florets which have an irregular twist. In colour it is striking—reddish bronze with a golden rose suffusion, gold reverse.

MISS STOPFORD.—This has medium, wide, drooping florets, creamy, white, deepening towards the centre as the flower unfolds.

COL. WEATHERALL is a deep bronze yellow with flat florets; a promising variety. Henry Perkins has this season been grandly shown, on many occasions, as much as 9in in diameter. The medium wide florets droop most gracefully. The colour is attractive—a rich deep yellow, overlaid with bright chestnut crimson in stripes and suffusion.

MRS. J. P. BRYCE (Godfrey) is a pure white, broad petalled variety, incurving loosely and building up a flower fully 6in in diameter; first class certificate as an incurved this season. Devonshire Hero, also incurved, rich orange yellow with pointed florets.—E. MOLYNEUX.

Notes from South Wales.

One of the chief events of the year in Cardiff, namely, the Chrysanthemum Show, has passed off most successfully. The Cardiff Chrysanthemum Society is to be congratulated on breaking away from the old-fashioned style and making their chief class eight vases of Japanese blooms instead of twenty-four distinct. The result quite justified the departure; for there were two long tables in the body of the hall entirely filled with big blooms in vases. The single vases with five blooms of one variety were most attractive classes. Another new class was for six pots Gloire de Lorraine Begonia. These were arranged down the centre of one of the long tables on a slightly higher stage, and the effect was charming. Mr. A. F. Hill, who carried off the N.C.S. certificate for the best bloom with a grand bloom of F. S. Vallis, is a most enthusiastic amateur, who personally grows his own plants to the smallest detail.

DAHLIAS.—Mr. W. Treseder's stand of Dahlias has become quite an annual feature, and I noted lovely coloured blooms of

the following: Etna, Artus, Ajax, Clarence Webb, Mrs. J. Crowe, Mrs. Carter Page, Mary (a new and attractive bicolor), Vesuvius, W. Treseder, Ringdove, P. W. Tulloch, Mr. Seagrave, Mabel Tulloch (a lovely pink), Eva (a good white), J. H. Jackson, H. J. Jones, Gabriel, Mrs. E. Mawley, and Mrs. Winstanley. He was awarded a gold medal.

At SWANSEA SHOW the chief honours for cut Chrysanthemum blooms were carried off by the Cardiff division, Mr. Hill again having the premier bloom, F. S. Vallis. This appears to be a grand variety and no one can overlook it. The writer had to miss Swansea this year, but was at

ABERYSTWTH SHOW, held the same day in the Pavilion on the Pier. The chief honours for cut blooms fell to Mr. Winstanley, gardener to Sir Pryse Pryse, Gogerddan, Aberystwith, who won the challenge cup for twelve Japs and twelve incurveds for the second year in succession. His best blooms were Lily Mountford (premier bloom), Mrs. Barkley, Kimberley, Nellie Bean, Mafeking Hero, W. R. Church, Mrs. G. Mileham, and Chenon de Léché amongst the Japs; and C. Curtis (grand), Madam E. Roger, Lady Isobel, Hanwell Glory, Edith Hughes, Ada Owen, and D. Foster. He had a bloom of Mrs. F. Judson 8in in diameter, but lacking depth and finish. Mr. H. Austin was second in this class, and Mr. Hazeldene, gardener to the Countess of Lisburne, was third. Mr. Winstanley also won in classes for twelve Japs and twelve incurveds with similar blooms. The groups of Chrysanthemums produced four competitors, led by Mr. Winstanley; second and third places being secured by Mr. J. Websdell and Mr. Jas. Purton respectively. Fruit was scarce, but vegetables were exceedingly well shown. Messrs. Clibran, Altrincham, and Messrs. E. Parsons and Co., Swansea, put up meritorious trade exhibits. Mr. Weller, the Corporation gardener, put up a very fine group of Chrysanthemums, not for competition.

What struck me as an excellent idea, and worth noting by other societies, was the combined programme and catalogue issued by the committee and on sale in the pavilion, all the exhibits being arranged numerically. It also prevented much confusion when staging. [Could you kindly send us a specimen?—Ed.] If enthusiasm counts for anything, Aberystwith Society should flourish for many years.—A. H.

At Trinity Grove, Edinburgh.

Notwithstanding the unfavourable season, "Mums" are not after all to be such a bad turn-out in the North as we had expected; true, the bulk of the blooms are necessarily crown buds. Round the Hamilton district the show is by no means much behind previous ones, a fact which says a good deal for the general attention bestowed upon this useful winter flower. When recently at Trinity Grove, Edinburgh, I saw a fine collection of blooms likely to give a good account of themselves at the forthcoming show at Edinburgh. In our own lot damping of the petals is very persistent, and upon the whole they are not so satisfactory as usual.—D. C.

W. Duckham and Cheltoni.

Growers in the United States of America appear, from the following, to be well satisfied with these varieties. We have waited long and expectantly (says a writer) for a pink Chrysanthemum that should be on an equality with the good white and yellow ones. The outcry has been, "Too much white and yellow; give us pink." And in the endeavour to supply the cut-flower market with pink the fickle and uncertain Vivian Morel has been the grower's mainstay, but with more vexation than profit. We need no longer deplore the paucity of pink, for, as an early pink variety, Mrs. Coombes improves with age and is here to stay, and succeeding it Mdle. Marie Liger has strengthened the good impression it created last year. In William Duckham, however, we have the advent of a peerless beauty of surpassing merit, vigorous in growth, stout in stem, well clothed with heavy foliage, and crowned with a flower that may be termed perfection alike in form, finish and colour. Our English contemporaries gave it great praise when it won the silver medal at Edinburgh last year, but some of their greatest acquisitions have refused to adapt themselves to American conditions. Here we have one that asserts itself at once, attains the zenith of Chrysanthemum beauty in its first season, and apparently deserves the highest meed of unqualified praise. Chrysanthemum W. Duckham was raised in England from Australian seed, and probably herein lies the secret of its ready adaptability, since the Australian varieties have already shown a facility of response more marked than those entirely of European origin. The short neck is no detriment; in fact, rather enhances the beauty of the flower by giving it a slight elevation above its mantle of luxurious foliage, so that the eye can better appreciate its bold yet graceful contour. The colour is a clear uniform light pink. Cheltoni is a sport from Nellie Pockett. It is in every respect a counterpart of its parent, in a really good shade of yellow, altogether brighter than is usually seen in a yellow sport from a white variety. There appears to be a slight variation in form, the petals more closely unfolding.

**Epigæa repens (Mayflower, Ground Laurel, or Trailing Arbutus).**

On the mountains of Pennsylvania this hardy evergreen shrub seems to grow in luxuriance. Its beautiful white flowers tinged with red exhale a rich spicy fragrance, and blooming in May as it does it breaks the monotony before summer has scarcely proved her presence with us. This species thrives best in peat soil and in shady situations, and many northern aspects would be quite suitable for its existence. Some healthy patches of it are to be seen in the Wisley Garden.

Berried Solanums.

Solanum capsicastrum (Jerusalem Cherry) and Celestial Peppers ought to be well berried by this time. The fruit hangs on for a long time and is now assuming its many-coloured hues. Give the plants plenty of room to keep the lower leaves from falling, and if they appear to be in the least pot-bound feed with liquid manure once a week. This will give the foliage a dark green colour. They should be well syringed daily, for the scale is liable to infest them, and is difficult to dislodge when it once gets a foothold. A temperature of 55deg at night and the full light at all times is an essential.

Forcing Spanish Irises.

The following was given in answer to a correspondent of the "American Florist":—"We have never been able to force Spanish Irises successfully. For the past few winters we have tried to force a few hundred bulbs, experimenting in different ways, but our efforts have been in vain—the bulbs, with the exception of a few, simply do not flower. One batch we handled just as we do Dutch bulbs—that is, we planted them in boxes and allowed them to remain outside in a frame until February, and then subjected them to a temperature of 50deg; another batch we kept indoors in a cool house of 45deg all through the winter; a third batch we placed in a temperature of 60deg after the bulbs were nicely started; in all three cases, however, the bulbs failed to flower in sufficient quantity, and we have finally come to the conclusion that they cannot be forced successfully. If any florist has had success in forcing them, we should all be pleased to hear of his method.

Cobœa variegata.

This is a form of *C. scandens* which is considered one of the finest of climbers, especially good for indoor work and conservatories, though it does well outside if started in midwinter, and plants well provided with roots are used at planting time in spring. All the fine qualities as a clean, rapid climber found in the old, well known *Cobœa scandens* unite in this splendid new variety with the additional charm of its unique colour-variegation of foliage and flower. The dark green leaves are bordered by a band of deep golden yellow, becoming almost pure white on the matured foliage. If exposed to the sun this variegation is blended and interlaced with delicate red and violet shades, all this exquisite colouration extending from base to top, enhancing greatly the beauty of the flowers. It is also claimed that this new kind in all its parts is more robust and vigorous than the old sort, yet in its growth and habit more refined and graceful. It would seem that a plant with these attributes would soon be found in every garden and conservatory on the globe, but it is feared such will not be the case, as it may be many years before plants of *Cobœa variegata* can be obtained at anything like a reasonable price. It was introduced by J. Veitch and Sons, Chelsea, but as yet is not listed in catalogues of many growers, though found on a few private places. Its scarcity is owing to the fact that this novelty is one of the most difficult to propagate. From seeds, as is the case with all variegated plants, propagation resulted in disappointment to the experimenters; root-grafting was a total failure, and nearly all the cuttings, taken in the usual way, rotted. Still the latter method is the only one resorted to, short stocky shoots furnishing the largest percentage of callus-forming cuttings. About five out of 100 will root.

Nicotiana Sanderiana.

This novelty ranks as one of the most promising for general use, and which is sure eventually to find its way into every park and garden. It is a cross between *Nicotiana affinis* and an unnamed plant of the same genus. The flowers are of the brightest carmine red, are large and numerous, and last fully two weeks. One of the plants shown had twenty-two flower stalks with 234 open flowers. The time of flowering is about three months.

Floral Decorations.

Among the designs seen in leading London West End shops recently were the following: A cushion of white Chrysanthemums, fringed with Lily of the Valley (one spray in a single leaf each), and a loose bouquet of pink Carnations was poised on the left-hand upper corner. Another design was that of a cross furnished with grey lichen, with Poinsettia bracts arranged with white flowers at the crosspiece.

At Belfast show Messrs. A. Dickson and Sons had a miniature lake bordered by choice Ferns and dwarf plants, on which a floral full-sized swan was gracefully floating. Another beautiful design was a mirror, exquisitely framed with deep yellow Chrysanthemums, cornered with knot-trophies of Orchids. Placed on an easel, draped in soft tulle, with two white birds on top, it was most effective.

Fuchsia microphylla.

It is with great pleasure that we hail this old, almost forgotten favourite. E. J. Peters says: "Growers of to-day have no time, no room to spare in their overstocked greenhouses, to give a fair and thorough trial to new introductions; one novelty has to make room for another, and that is thrown out to afford room for the next. How, then, can it be expected that gems of the past like this one and many others, far superior to ninety per cent. of present day novelties, will find recognition? Their place in our greenhouses is occupied by new plants, and yet was there ever a pot plant so thrifty, so floriferous, so beautiful in its mantle of hundreds of purplish red blossoms, its finely cut foliage, and so easy to propagate and to grow as *Fuchsia microphylla*?"

Antirrhinums to Succeed Chrysanthemums.

According to "American Gardening," one of the most useful flowers to follow the Chrysanthemum is the Antirrhinum. If the benches are cleared of all stock, plants given a coating of rotten manure or fertiliser, and spaded over, the Antirrhinums transferred from pots will quickly take hold. If no pot plants are at hand, late sown or rooted plants from the open ground will do very well. Do not attempt to grow a promiscuous assortment of colours, but stick to one or two good colours, like white, yellow and pink, propagating from the best strain each season. Antirrhinums can be supported in the same way as Carnations, allowing the cross pieces of twine about three inches more width. This will be found better than tying the plants to stakes, which necessitates cutting the ties each time a spike is needed. Nice plants may also be grown in 5in or 6in pots.

Interchange of Plants.

There is one sort of trade, if it may be so called, within the British Empire which has not waited for fiscal or any other artificial inducements to become firmly established. It is related in the official report on the administration of Seychelles last year that the curator of the Botanic Station had "personally conducted" himself to Java, Ceylon, and other lands in the tropical belt, to ascertain what plants there growing could be hopefully experimented with in his own little colony. This process is going on in most parts of the Empire; there is constant exchange between them of plants and animals. Of course, many of these emigrants refuse to become acclimatised in their new homes, but in numerous instances, brilliant success attends the endeavour. Australia, for example, is indebted to the process for her finest fruit and salmon, both being derived from importations, while English horses, cattle, and sheep have founded illustrious families in all the leading colonies possessing congenial climates. On the other hand, the gracious bird which figures so largely in the British menu at Christmas came originally, like the proud peacock, from the East. It seems, moreover, that English hothouse Pines and Grapes beat their foreign ancestors' hollow for quality; and in the Scilly Isles, some of the Narcissus growers are said to be hopeful of acclimatising the Banana at Treviso.—("Globe.")

Hardy Coniferous Trees.

Conifers for Window Boxes.

This is the time when every effort should be made to encourage a more extensive use of Conifers in exterior window boxes and vases. Get as much of this work done now as you possibly can. It is next to madness, nay, even barbarous, to have this work delayed until the soil is frozen, when shrubs are dug up with pickaxes, roots broken and the soil shaken away, and the work otherwise carelessly done, with the inevitable result that the work must be done over and you possibly lose a customer. Ivy seems to have done remarkably well this year. You need not disturb those growing in the vases or boxes, and when you order your Conifers, insist that the roots be kept moist.

Picea pungens—Koster's Blue.

Picea pungens, or *Abies pungens*, as some nurserymen list it, is one of the most valuable of our native ornamental evergreens (says Mr. J. Meehan, of New York State). In the first place, it is one that is hardy over the whole of our country, practically, being a native of the mountains of Colorado. As it exists in its native home, great variations are found in the colour of the foliage. There are some of the typical green as displayed by most evergreens, and from this there are forms running to those of a most lovely silvery blue. It has been the aim of all growers to select for propagation the kinds of deepest blue colour, and it is because of this that it has become known everywhere as the Colorado Blue Spruce. Collectors aim to select seeds from the bluest trees, which reproduce their kind fairly well. Many nurserymen here and abroad have selected a particularly blue one, and have propagated from this particular tree. Koster has done so, and because of this the beautiful silvery blue foliage of his stock has made Koster's Blue a well-known type of the best. In June, when the young growth is in perfection, the beauty of these trees is very great. [We might add that in England it is one of the most ornamental Conifers here grown.—Ed.]

The Planting Size of Evergreens.

In conversation with a fellow nurseryman recently (observes Mr. Meehan in an American contemporary), on my remarking that there was a dearth of large evergreens, he said he was very glad there was, and he then went on to relate how the large evergreen and the large deciduous tree were each a menace to the good feeling which should prevail between the nurseryman and his customer. These large trees were hard to dig successfully, hard to deliver and hard to grow, he said; and for all concerned the smaller-sized tree was much the better. There is a great deal of truth in what this friend stated. When advice is asked me I invariably urge the selection of a medium-sized tree. It is surer to grow, and will overtake a larger one in almost all cases, as its roots are not injured in transplanting to the extent those of larger ones are. And then there is the satisfaction of seeing the smaller one gain stature and thrive! An evergreen of three feet and a deciduous tree of eight feet make an appearance at once, and in a very short time double their height. The nurseryman is safe, and so is the customer, when such trees as these are planted. In the case of a dwelling with no trees about it, it is proper to set large trees, to be in character with their surroundings, even if they do stand still for a year or two; but, as a fact, smaller trees will usually outstrip them in growth.

The Beautiful Nordmann Fir.

The unwonted sight of some Nordmann Firs being used for Christmas trees in the way of decorative plants in tubs, leads me to say a few words in favour of this lovely evergreen. The fact of its being used denoted progress in the way of spending money at least, for a Nordmann Fir costs cash, and the plants seen, being not less than three feet in height, were such as sell at 12s. 6d. to 20s. 6d. each. Having a broad spread and such handsome green foliage, it could not be bettered by any other kind for certain positions, such as a centrepiece for a table, where a green tree is wanted, not for the hanging of presents. Such trees as this are for the wealthy; the mass of the people will be satisfied with a Balsam Fir, Norway or White Spruce. The Nordmann Fir is really the king of Firs in the northern States of America. It is always of luxuriant appearance, even though it has just passed through a hard winter; and this can be said of but few other evergreens in the family of Firs. In the matter of transplanting (says Mr. Meehan), it is not a difficult case. With a little care, seeing to it that the roots do not become dry, transplanting is usually successful. One cause for the reason of this beautiful evergreen being higher-priced than some others is its exceedingly slow growth for the early years of its seedling life. For a year or two the little plants are barely out of the ground. Every year thereafter their advancement is less slow until, when of a three-foot size, six to ten inches a year will be added to their height.

NOTES

NOTICES

Chrysanthemum Show Dates.

York show will be held on November 16, 17, and 18, 1904, not November 11, 12, and 13, as credited by us to Mr. Molyneux on page 463. Hull show will be held on November 16 and 17, 1904.

Edinburgh Chrysanthemum Show.

There were over 800 entries. The number of cut Chrysanthemum blooms in competing stands was 2,224, besides those in groups and non-competitive exhibits. In plant competing classes there were 220 Chrysanthemum plants. The money taken at turnstiles during three days was £1,069, being £110 ahead of last year's drawings. Over 40,000 persons visited the show.

Irish Gardeners.

The first conversazione of the Irish Gardeners' Society was held recently in the XL Café, Grafton Street, Dublin. The chair was taken by Mr. F. W. Burbidge, M.A., and a choice musical programme was given. Mr. F. W. Moore, of Glasnevin Botanic Garden, discoursed on the wealth of colouration in foliage, and referred to the glories of the autumn garden and the rich diversity of colour. Mr. F. W. Gunn had an instructive array of microscopes and botanical slides. He displayed the rotation of the protoplasm in *Valisneria spiralis*.

Dr. Masters on the Classification of Conifers.

We are informed that Dr. Maxwell T. Masters, F.R.S., lectured before the Fellows of the Linnean Society at their meeting on Thursday, November 20. The Doctor, who has had an accident to his arm and carried it in a sling, proposes to place Conifers into two great groups: one with thick foliage leaves and thick scale leaves in the cones (the flowers), the other represented by those with thin foliage leaves and scale leaves. Dr. Masters has specialised in Coniferæ for many years, and is a noted authority on the Order.

Birmingham University and Plant Diseases.

The lecturer on Botany of the University of Birmingham, Mr. A. H. Reginald Buller, D.Sc., Ph.D., has instituted a course of lectures on plant diseases, which it is hoped may result in the foundation of a new sub-department of vegetable pathology. The department would concern itself with the economic aspect of disease in cultivated plants and timber. The present course of lectures will have an important bearing on the newest methods of treatment of plants by spraying with chemical solutions, which has been shown by official returns to give an increase in the weight of crops amounting to about 30 per cent. The importance of vegetable pathology may be gauged from the fact that the great Potato famine which is reputed to have reduced the population of Ireland by about two millions was brought about by the ravages of Potato mildew. The lecturer has been engaged in research work for four years in Germany into the subject of plant and timber diseases.

Lecture on Heating and Ventilating.

On Friday last Mr. W. J. Simpson (late of Falkland Park Gardens, Norwood) gave a lecture before the Beckenham gardeners on "Heating and Ventilating Horticultural Structures." The lecturer favours the upright tubular boilers, and would recommend two medium boilers rather than one larger one. Pipes should be distributed over the houses to better equalise the temperature. Rubber rings for joints were favoured, also Portland cement. Of course, simultaneous ventilators with lever arrangements were recommended, but how many of us have yet to drag away at the clumsy top sliding light and casement front sash! Mr. E. R. Palmer, sanitary and hot-water engineer, Beckenham, who presided, gave some very practical remarks as to dealing with damp stokeholes, &c. He also claimed that first-rate results may be obtained from the plain saddle boiler, well set. Mr. Robertson, of Winterdyne, secured a certificate of merit for a vase of Japanese Chrysanthemums.—T. C.

A Correction.

An error crept into the heading of my notes on "The Priory," published last week, page 468. The heading should have read "The Priory, Warwick," instead of Leamington as published. —WANDERER.

Birmingham Gardeners.

The annual discussion on the leading features of the Birmingham Chrysanthemum, fruit, and vegetable show took place on November 16, and, as usual, was opened by Mr. W. Spinks, the treasurer. A Cultural Certificate of Merit was unanimously awarded to Mr. H. Dedicott, gardener to W. A. Wiggin, Esq., Griffin's Hill, Selly Oak.

Permanent Canadian Exhibition.

We are informed that the Dominion officials in London have taken a very wise step in giving their patronage and support to the permanent Canadian exhibition now being arranged at the Crystal Palace. The Colonial Exhibits Company and the Crystal Palace Company are jointly erecting a handsome pavilion for exhibits of Canadian manufactures and farm produce, and Mr. C. F. Just, of the High Commissioner's staff, has been appointed honorary organising secretary to the show. It is said that special attention will be given to articles entered for household consumption and domestic economy in this country, and all articles in which Canadians hold their own with the United States, while periodical displays from Klondyke and other special districts will also be held. No better way of influencing business or emigration could be imagined, for an enormous crowd of 'desirables' visit the Palace yearly, and, as the place is not overstocked with exhibits, an attractive stand is sure to command attention."

National Chrysanthemum Society—The Floral Committee.

A largely attended meeting was held on Monday, November 23, at the Essex Hall, Strand. The exhibits were numerous, but the majority were much below par, and received scant courtesy at the hands of the committee. If exhibitors would only recognise the fact that unless their seedlings or sports are in the best possible condition they will never obtain an award, the committee would not be troubled with half the varieties they inspect at the present time. On this occasion only three varieties obtained recognition. Lady Cranston (W. J. Godfrey). It is a sport from Mrs. Barkley, pure white, with the Barkley colour clearly shown at the top of the flower; a most effective variety, probably the best seen this season; F.C.C.—Dorothy Pywell (W. Seward). A fine creamy white variety, which is already in commerce. The magnificent blooms staged fully justified the award of F.C.C.—Pink Pet (J. Peed and Son). A single, rosy-pink, very free flowering; distinct and good; F.C.C.

A Notable Australian Horticulturist.

Mr. C. Bogue Luffmann, principal of the South Australian School of Horticulture, though of singularly youthful appearance, was born in England something over forty years ago. At a very early age he went to sea, and saw a great many outlandish places and peoples. Of necessity and by inclination he has followed many different callings; but whatever his employment, he has always found time to make a close study of agricultural and horticultural subjects, and has had the advantages of travel, study, and experience in all the most important centres of Europe. He has written books of travel, stories of adventure, and a great deal of matter of a curious and educational character. Mr. Luffmann has also had the honour of supplying special reports on various rural industries of Continental Europe to the British Government. He takes no interest in exhibition flowers, but is a devoted lover of gardening, and his great and only ambition is to plan the agricultural and sylvan features of the Federal Capital, if it is established in his day and generation. With the object of creating a standard of taste in Australian gardening, he is at present engaged in giving a course of lectures on garden design and management. These lectures will shortly be published. Mr. Luffmann (says the "Garden Gazette," Melbourne) is generally regarded as one of the finest platform speakers in the service of the Government, a fact which told in his favour when he had the misfortune to be misunderstood by some of his fellow horticulturists.

Jones' Chrysanthemum Guide.

Mr. H. J. Jones, of Ryecroft, Lewisham, sends us the new issue (13th ed. 1903) of his Chrysanthemum Guide. It is a book of over 62 pages of text, and deals with all phases of the culture of this interesting and beautiful flower. In paper covers it costs 7d. post free; or 1s. 2d. if the cloth boards type is selected.

Appointments.

Mr. H. Sweet, late head gardener to W. P. Snell, Esq., Belmont Park, Bedhampton, Havant (Hants), in the same capacity to Miss Meiklam, The Towers, Bedhampton. * * Mr. J. Turton, for the past seven years gardener at Becca Hall, Leeds, has been appointed gardener to Mr. and the Honourable Mrs. Foster, Stockeld Park, Wetherby, Yorks, and enters upon his duties early in December. * * Mr. Edward Rutherford, late gardener to E. M. Courtanev, Esq., M.P., Dunmore, Glenagary, co. Dublin, has been appointed gardener to Lady Keane, Cappoquin House, co. Waterford, and entered on his duties November 11.

Cardiff Gardeners' Association.

On Tuesday, November 17, the members met at the Central Free Library to view the large and costly collection of books on horticulture, this being the fifth successive year that a meeting has been arranged. The librarian is fully convinced that in this way the books are more readily sought after than had been the case before. Many volumes (ancient and modern) have been added since the last visit, for Mr. Ballinger is at all times on the alert for anything that he considers worth adding to this department. An enjoyable evening was spent, and the best thanks of the members were accorded the librarian.

Women and Horticulture.

Mr. A. D. Hall, director of the experimental station at Rothamsted, recently delivered an address on "Horticultural Instruction for Women." Horticulture had of late experienced an enormous expansion in England, and there was no reason to suppose that the expansion was over yet. The expenditure on private gardens and the demand of the public for fine fruits and flowers were growing year by year, and in such a developing industry women were far more likely to find their opportunity than in an occupation which had settled into routine. A demand for teachers of horticulture existed, and could be met by women. Country elementary schools were being pressed to take up some form of instruction bearing on rural life. Hitherto the great difficulty had been the lack of trained teachers, but now that the county councils had taken charge of elementary education he hoped to see specialist teachers appointed to groups of schools. Properly educated women would be the best possible teachers for such work. On the motion of Sir John Hibbert, a resolution was carried pressing upon the Government the claim which colleges for the horticultural instruction of women had to some share in the fund placed at the disposal of the Board of Agriculture for educational purposes.

Glasgow's New Park at Thornliebank.

What Lord Provost Sir John Ure Primrose, Bart., has described as the brightest gem of Glasgow's group of public parks, is that part of the Thornliebank estate, generously gifted to the city the other day by Mr. A. Cameron Corbett, M.P. A charming feature of the estate is the romantic and picturesque Rouken Glen, in which the visitor might imagine himself a hundred miles from the din and bustle of a great city. The Rouken stream and waterfall add greatly to the beauty of the park, which is certain to become one of the most valued of Glasgow's numerous outdoor possessions. The part which has been purchased by Mr. Cameron Corbett, and offered to Glasgow as a public park, covers 136 acres or thereby, and has cost £24,000. Along with this the donor has generously handed over the mansion house of Thornliebank, costing £30,000. A further portion of the estate, covering 190 acres, has been acquired by the trustees of Hutchesons' Hospital for feuing, at a cost of £22,000. The new park equals in extent the oldest of the city's pleasure grounds—Glasgow Green—with which it will rank as second in respect to Bellahouston Park, which covers 185½ acres. With the addition of Thornliebank, the park acreage of Glasgow will amount to the extensive figure of 1,195½ acres.



Rose, Niphetos.

We cannot do better than quote the author of "The Book of the Rose" in part of what he says of Niphetos:—"This Rose is a good instance of what is termed 'free' growth, i.e., neither long nor stout, but branching, and generally growing somewhere. The foliage is good and not much liable to mildew, but the blooms will not stand rain. . . . Niphetos, the purest of all white Roses, has a long bud, especially suitable for bouquets and wreaths. It is also free-flowering and bears forcing well. It is no wonder, therefore, that it is, and has been, cultivated for market purposes to an astonishing extent. It is also capable of being exhibited as a Rose of great merit, with very fine petals and of the largest size; but in this respect it seems to have deteriorated or been superseded, as it is certainly not so often shown now as formerly. They must be cut young for show, as the shape is not lasting. . . . It is free-blooming throughout the season, but the autumnal buds do not come large, and require fine weather. It does not do as a dwarf, for the blooms come smaller, and the wood being neither stiff nor upright, the petals get much injured by wind and rain. . . . It is best for exhibition as a maiden standard, and does well, if fully fed, on a low wall. The raiser was Mons. Bougère, and the name Niphetos means in English, 'snowy.'"

Notes on Some of the Newer Roses.

(Concluded from page 465.)

Coming next to the new Teas named in the recent Rose analysis, there can be no doubt that the three candidates selected have come out in the election in their proper order of merit. Mrs. E. Mawley rightly heads the list: issued in 1899, this fine Rose, whose only approach to a fault is a weakness in very hot weather, is no doubt by this time sufficiently well known to all exhibitors.

Souvenir de Pierre Notting, on the other hand, having only been sent out last year, is hardly well enough known yet, though I fancy it might have been had from the raisers, Soupert et Notting, in 1901.

Being a cross between Maman Cochet and Maréchal Niel, it undoubtedly should have a goodly heritage, and great things might well be expected of it. Very good accounts have reached me of its growth and the beauty of the flowers, and I cannot doubt their accuracy. But it has failed to make any strong growth with me at present, either as dwarf or standard, and I have been rather disappointed with the colour, except under glass. I hope for better things next year, and in the meantime all lovers of Tea Roses should certainly make a point of getting it.

Lady Roberts, the last on the list, is a beautifully coloured sport of Anna Olivier, which it seems to be identical with in all but colour. As the well-known original is itself very variable in colour, flowers on the same plant coming occasionally nearly as clear in tint as Madame Hoste, and at others with more or less prevalence on the pale yellow ground of buff or terra-cotta, occasionally nearly tinting the whole flower, it is odd that Frank Cant and Co. should have succeeded in fixing this sport, as I take it they have done, and they are to be congratulated on the achievement. I have not personally tested the variety sufficiently to be able to say anything as to any particular manners and customs it may have.

I should like to mention two other new Teas which I have tested. Boadicea (W. Paul and Son, 1901) I have only had as maiden standards, a position in which Teas are often not seen at their best. It seemed to me, however, to be very promising as an exhibition Tea, large enough, with good point, stiff lasting petals, and attractive and distinct colour.

And those who are anxious to have a variety which will give flowers of a really good yellow, a deep colour, shining like a lamp among hundreds of other plants, might try Georges Schwartz (Schwartz, 1899), for I think the colour, which fades but little in the sun, is the best yellow among the Tea Roses.

Unfortunately, I am afraid it has not very much to recommend it besides the colour, though the shape is pointed and good: it has not proved a strong grower with me, or free in flowering, and a single-stemmed maiden shoot will barely produce a bloom large enough for show. Beyond the sole point of colour, it is plainly not a variety to recommend for general cultivation.

Of new "breaks" among garden Roses, the most noteworthy seem to be Soleil d'Or (Pernet Ducher, 1900), a hybrid Austrian Briar, the first novelty in that section for more than sixty years,

and rugosa repens alba (Paul and Son, 1903), a cross between the rugosa and Wichuraiana families, which appears to be an astonishing Rose to grow and flower.—W. R. RAILLEM.

H. T., LIBERTY.

Liberty Rose requires from eight to ten degrees more heat than is usually given to Bride and Bridesmaid. Above all never let it receive any check that will encourage its propensity to go to sleep in cold weather. When it once is allowed to get drowsy, that settles it.

Hartham Park, Corsham, Wiltshire.

MANY interesting features are to be found in the gardens and grounds attached to Hartham, the well-known residence of Sir John Dickson-Poynder, and it needs only a brief space of time for others to develop, since so much that is new is constantly being taken up in the several phases of garden work. Some striking examples of the rare judgment of "Capability Brown" are to be seen in the early history of the gardens, the effects of which are now so fine and bold in character. Brown possessed an originality of mind that few can imitate, but Sir John Dickson-Poynder and his gardener, Mr. Welch, by joint conceptions, are laying the foundation of new features which, if they do not eclipse old styles of landscape work, may at any rate add new features to those already existing, commensurate with the demands and requirements of the present day taste.

To relate all and everything already accomplished and still in progress would require much space to do justice to the theme. It might be said, however, that the lawns have been considerably extended. Choice specimens and clumps of rare flowering and ornamental shrubs have been planted, together with pergolas of Roses and other familiar trailing plants. The creation of broad terraces with sheltering belts of Yew, has been taken up with great success, though not without considerable labour—for an under stratum of rock makes the work both heavy and slow. On either side of the terrace are broad borders filled with herbaceous plants in large variety, and of considerable extent, and, when complete, will change the whole aspect of the place and brighten the heavily timbered and undulating landscape, so much of which comes within the range of the mansion and grounds.

New ranges of glass have been erected, and others are in contemplation, which are indeed necessary to cope with the heavy demand made on the garden. Large lean-to structures have for many years supplied the yearly crop of Grapes; these are now augmented by young Vines planted in a new span-roofed house. It has seldom been our privilege to witness such a wonderful Vine growth or such promising results in crop. The borders are constructed on piecemeal principles, the existing provision being but four feet wide, and having a depth of three feet. The main rod of this year has a length of 10ft, fully furnished with lateral growths, and though planted so recently as May, 1902, there is a girth of 3½in in one or two of the shortest rods. Added to the turf procured locally is burnt refuse and a small admixture of half-inch bones, yet so simple a border gives astonishing results in leaf and fruit growth. From the eighteen Vines, over one hundredweight of Grapes have been cut this year, and there is every indication of a heavy and full crop next season, the ripeness of the growth tending towards a mahogany-like solidity, which is much prized by all Grape growers.

Another speciality of Hartham is the cordon Pear wall, of which Mr. Welch is justly proud. The crop here, as in most gardens, was much below the average, though some fine fruits were gathered. Some beautiful clear-skinned fruits of Doyenné du Comice, Beurré Hardy, Beurré A. Lucas, Marie Louise, Nouvelle Fulvie, Beurré Bachelier, Bergamot Esperen, Pit-maston Duchess, Beurré Superfin, Beurré Diel, and Emile d'Heyst were stored, many of them being over one pound each.

Cyclamens are well grown in about a dozen varieties to the number of 200—and such plants! Really, one is made envious in the privileged inspection of such a magnificent collection of plants and colours. Sutton's Giant White, Salmon Queen, Vulcan, Papilio (Butterfly), and others, make the air quite odorous with their pleasant perfume.

Calanthes, some 150 in number, are not less useful for the furnish of the stoves and the decoration of the dinner table. These are not grown in pots larger than 6in, and some are less than this. Though C. Veitchi are the most numerous, C. vestita and C. v. rubra and C. bella are present in sufficient numbers to make a varied show, and the bulbs unusually strong. On shelves in the same houses Adiantum Farleyense, in 54-pots, simply reveal in the sun and moisture-laden atmosphere of summer time, as also do large baskets of Asparagus Sprengeri, so useful for cutting. Crotons (Codiaeums) and Dracenas fill a compartment, both being conspicuously bright and well grown.

A house full of Zonal Pelargoniums was most striking in

colour and flower trusses, which are immense, the varieties being Paul Crampnell and Athlete. With a good batch of these in winter time, Mr. Welch considers Poinsettias unnecessary, because their trusses and the colour are equal, if not superior, and their season of use a much more extended one.

The familiar and pretty pink Begonias Gloire de Lorraine were very much in evidence, and nowhere have we seen finer coloured or more vigorous specimens in their various sizes.

Another item of importance are the Chrysanthemums, which are this year so fine in flower yet dwarf in growth. Among the groups of large specimen flowers we observed distinguished blooms of Edward VII., Mr. L. Remy, C. H. Curtis, Nellie Pockett, Madame G. Debrie, M. A. Barrett, Mrs. G. Mileham, Mrs. Mease, Madame Carnot, Queen Alexandra, Miss A. Biron, Jane Molyneux, Mafeking Hero, and Mermaid. These are only a few of the more striking flowers on view, but the season over which a supply is needed demands not only a goodly number of these specimen flowers, but a quantity of bush plants, both for cutting and as plants in the house. For this a large selection is made, including singles, which are so well adapted for the lighter phases of floral work. Hartham Gardens are so full of interesting studies that one might continue almost indefinitely to recount their variety and purpose; but sufficient has been already said to show what credit redounds on the head gardener and his co-workers.—W. S.

County Council Instruction: Horticulture.

In preparing the new issue of the "Horticultural Directory," its editor has included a full list of instructors in horticulture, as appointed by the respective County Councils in England, Wales, Scotland, and Ireland. The responses to his communications contained some interesting information which could not be published in the "Directory," but which the editor has kindly placed in our hands. The following are extracts from the letters received:—

BUCKINGHAMSHIRE.—The instructor is Mr. Phillip Mann, but there is no experimental garden.

CAMBRIDGESHIRE.—Mr. E. Hobday is the instructor, and there is an experimental garden and county school.

CHESHIRE.—In connection with our agricultural and horticultural school at Holmes Chapel, we have large gardens, &c., and every provision for giving instruction in horticulture. See accompanying report, pages 70-76. [This, and other reports, we hope to deal with again.—ED.] Lectures are given in horticulture as per report.—RD. P. WARD.

CORNWALL.—Our instructor in horticulture is Mr. C. Hott, Lemon Street, Truro. We have several experimental gardens.—JOHN GILL, Kelston.

CUMBERLAND.—The name of the instructor in horticulture appointed by this County Council is Mr. George P. Berry (on the staff of the Durham College of Science, Newcastle-on-Tyne). An experimental fruit garden is maintained at the County Farm School at Newton Rigg, near Penrith.—C. COURTENAY HODGSON, M.A., The Courts, Carlisle.

DEVONSHIRE.—There is no experimental garden, but fifteen centres have gardens for teaching purposes. Our students number about 300, with fifteen local instructors. An assistant instructor is employed during each winter, but a second permanent one will probably soon be appointed.—C. BERRY.

DURHAM.—The County Council for this county has not specially appointed an officer to give instruction in horticulture. Northumberland, Durham, Westmoreland, and Cumberland are in co-operation in connection with the Agricultural Department of the Durham College of Science at Newcastle. All lecturers required are provided by that College.—J. A. L. ROBSON.

GLOUCESTERSHIRE.—Mr. W. Iggulden, Frome, Somerset, is our instructor in horticulture. We have no experimental garden.—HENRY A. HOWMAN.

HERTFORDSHIRE.—The County Council's horticultural lecturer is Mr. A. E. Burgess, 9, Glenferrie Road, St. Albans. We have no experimental garden (as such), but boys in evening schools have garden plots, and are instructed in gardening by Mr. Burgess.—A. DEAN.

ESSEX.—The lecturer in the principles of horticulture is Mr. E. Chas. Horrell, F.L.S.; in operations of horticulture, Mr. Chas. Wakely; assistant lecturer and demonstrator, F. J. Chittenden; gardeners, Mr. C. W. Aylett and Mr. A. W. Goldstone.—The school garden for instruction and experimental work in horticulture is three and a quarter acres in extent, and is at Chelmsford.

HEREFORDSHIRE.—The horticultural inspector in this county is Mr. A. J. Manning, 103, Green Street, Hereford. For some years we have had an experimental garden, but it will probably be discontinued next year (1904).—JNO. WILTSHIRE.

HUNTINGDON.—No instructor has yet been appointed. Arrangements for botany classes for teachers are in progress, and ground will be acquired for this purpose.—S. G. COOK.

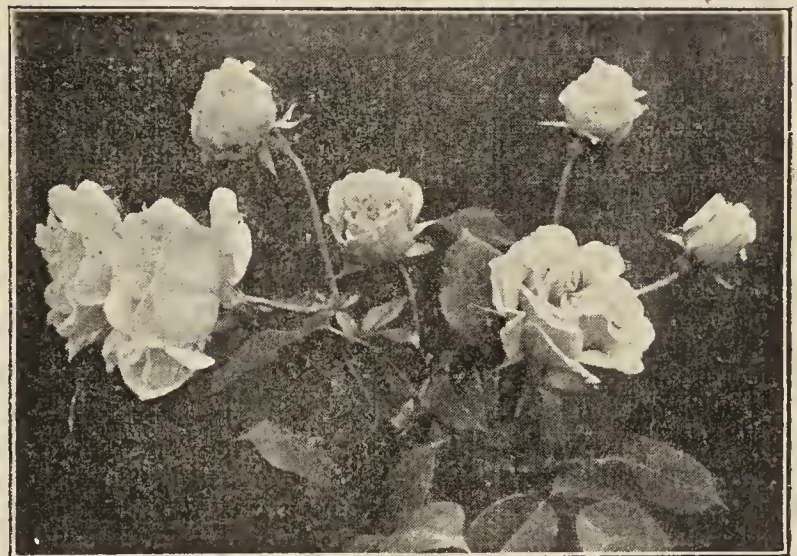
LEICESTERSHIRE.—This county has not appointed an instructor, nor has it established an experimental garden, but lectures are given

by the staff of the Midland Agricultural and Dairy Institute.—A. J. BAKER.

COUNTY OF THE PARTS OF LINDSEY, LINCOLNSHIRE.—Our education committee have not appointed an instructor in horticulture, and we have no experimental gardens.—CHARLES SCORER, Lincoln.

LONDON COUNTY COUNCIL.—The Technical Education Board of the London County Council is not giving any direct instruction in horticulture, but (1) Is making grants in aid of the Horticultural School of the Royal Botanic Society in Regent's Park. Mr. J. Bryant Sowerby, at the Royal Botanic Gardens, can give full information respecting this school. (2) Has met the expenses of certain botanic gardens which have been laid out in some of the London parks by the Parks Committee of the Council, so as to illustrate the more common natural orders of plants. (3) Is assisting the Historic Records and Museums Committee of the Council, and the Council is carrying out certain instruction in Nature Study in connection with the Horniman Museum at Forest Hill and the gardens surrounding the same.—WM. GARNETT.

MONMOUTHSHIRE.—Mr. W. J. Grant, Pentonville, Newport, Mon., controls and directs the horticultural instruction given in this county. In addition to agricultural lectures, he gives lectures upon horticulture, inspects and advises both landlord and occupier as to pruning, planting, and renovation, &c. Mr. J. H. Wootton also assists, giving instruction as to packing fruit, and the vintage of both cider and perry. Mr. F. F. Herbert likewise assists, his speciality being the bottling of fruit, &c. Bee keeping also receives a good deal of attention from Mr. Wootton. A regular and systematic course of instruction in agriculture and horticulture has for some years been carried on at the Farm School, Little Mill, including the production of fruit trees for planting, the various stocks afterwards to be budded.



Rose, Niphetos.

and grafted by the boys. The work carried on in this school each year receives most favourable notice from the Home Office and in the Blue Book, while the demand for the trees is generally greater than the supply. At several of the elementary schools throughout the county, garden plots have, with most satisfactory results, been established.

NORTHAMPTONSHIRE.—The instructor in horticulture, employed in this county is Mr. J. H. Walker, 20, Moorgate Street, Leicester. We have no experimental garden.—BYRON R. SIMPSON.

KENT.—The horticultural superintendent is Mr. W. P. Wright. There is no public experimental garden for horticulture alone.

NORTHUMBERLAND.—The lecturer in horticulture in this county is Mr. George P. Berry, Cockle Park, Morpeth. I may state, however, that a grant for instruction in horticulture is made to the Durham College of Science, in return for which the services of the lecturer are divided between the counties of Cumberland and Northumberland. I am sending you a copy of the eleventh annual report on experiments with crops and stock at our demonstration farm. On pages 98 to 103 you will find particulars which may be of interest to you. There is an experimental garden in connection with the farm, and also fruit plots at two or three centres in the county under the supervision of Mr. Berry.—C. W. MANNS.

NOTTINGHAMSHIRE.—The instructor is Mr. J. Smith, 18, Clipstone Avenue, Peel Street, Nottingham, and our demonstration gardens (fruit) are at Arnold (1); and Hucknall-Torkard (1).

RUTLAND.—No instructor in horticulture has yet been appointed by the County Education Committee, nor have we as yet an experimental garden.—CLEMENT G. BONE.

SALOP, or SHROPSHIRE.—The instructor in horticulture for the Salop C.C. is Mr. G. Malthouse, of the Harper-Adams Agricultural College, Newport, Salop. Experimental work is done at the H.-A. College, also at Wem Grammar School, and at Cleobury Mortimer College. All these experimental gardens are supported by the County Council.—W. H. PENDLEBURY, M.A.



Apple, Annie Elizabeth.

I quite agree with "E. D." (page 442), that the merits of this fine late Apple are not sufficiently recognised. I have constantly recommended it during the last few years, because it is very handsome, crops splendidly, and keeps till April; and during March and April it is good either for dessert or cooking. If I were asked to name the three best late Apples I should say: Lane's Prince Albert, Newton Wonder, and Annie Elizabeth. —H. D.

Large Cabbages.

The present year, with all its shortcomings (and truly they were not few), had some outstanding features in its favour. It has given, as records show in many places, crops of Potatoes in size above the usual, and occasionally approaching the stage of monstrosity. Big Cabbages also seem to be pretty general all over the country. Up the Clyde Valley a monster specimen was lately on view. In size it measured something like 9ft in diameter (sic), and weighed about 78lb. This ought to give satisfaction to enthusiasts in "big Cabbage" culture.—R. U.

Indictment Against Horticultural Travellers.

Who among your numerous readers, occupying a head gardener's place, has not at various times been the recipient of a visit from some traveller in the seed line? "Mr. Nuisance" not unusually turns up at a most inopportune time, when perhaps the gardener is engaged with some of the gentry, or busy with some very important work. It matters not to persistent "Mr. Nuisance," who makes his inquiries (with an air of importance) from the first under gardener he encounters. On being told that the "Boss" is engaged with perhaps his employer, "Mr. N." promptly says he'll wait; and proceeds to swagger about the garden, often in full sight of gardener and his employer, and the latter generally inquires who the swaggerer is.

Perehance "the Boss" is engaged in some remote part of the garden. It is all the same to "Mr. N.," whose business is so pressing that one of the under gardeners wastes valuable time in seeking for his chief, who, on being found, is informed that "a gentleman wishes to see him." One traveller actually had the temerity to come right into the mansion for me.

Well do I recall the various dodges resorted to by one particular chief (while I was living under him as foreman), who would generally prime me with all sorts of messages and excuses to deliver to "Mr. Nuisance." On two different occasions do I remember the unwelcome callers at that particular garden hanging about the greater part of the day trying to catch "the Boss," but without avail, though the latter had various peeps at his uninvited visitors. I think I enjoyed the fun more than anybody. However, since I became a head gardener, I have had cause to understand my old chief's aversion to travellers.

"Mr. Nuisance's" greeting with gardener is, of course, most cordial, anxious inquiries after health (not only of latter, but of Mrs. Gardener and family). Next, as to the state of affairs relating to gardens, followed often by impertinent inquiries as to existing relations between gardener and employer. They will then proceed to relate an account of their past visits to other gardening establishments, laying bare the amount of business transacted. I am invariably told by "Mr. N." that So-and-So has just given him an order for so many pounds' worth of "stuff;" consequently one becomes acquainted with a considerable portion of our fellow craftsmen's business transactions; matters which, I venture to think, should be no concern of ours.

Then again, I find travellers generally give a place a good or bad name according to the value of orders they have been able to secure. For instance, one of those gentlemen alluded to a well-known gardening establishment as being no good. I was surprised, and gently intimated that as a great friend of mine was chief there I knew that the garden was well kept up, and the work well carried out. "Ah, yes!" said "Mr. Nuisance," "but they always object to paying more than they are obliged, and the orders we get there do our firm no good." I drew my own conclusions, as I know that in that particular garden money is not stinted.

So much has recently been written concerning gardeners and illegal commissions, that I will not enlarge upon this part of the many inducements which some travellers hold out to gardeners to do a little business with them. One case only will

I mention, which came to my knowledge a short time ago. A traveller offered a friend of mine 5s. cash down, there and then, as an inducement to give him an order for goods to the value of about £1. Needless to say, the order was not given, and I venture to think that that traveller will not show his face in that garden again in a hurry. The above is, perhaps, an exceptional case, and before concluding I should like to say that among the many travellers who have from time to time worried me, some have proved themselves to be excellent fellows. —A. N. NOYED.

[It is to be understood that the Editor takes no sides on any subject of debates, and each correspondent is alone responsible for what he states.—ED.]

Wake Up! England.

Attention may be drawn to what our representative says of the Edinburgh Chrysanthemum Show, which is reported on page 498. We may add that the Journal's representative on this occasion was one of the best judges from the South of England. A Scottish correspondent also refers to the show thus: "The exhibition was a marvellous success, a wonderful contrast to your National [which he had the privilege to visit. —ED.] I think the Edinburgh show must soon become the National." Very handsome prizes are offered.

Rose, Rosette de la Legion d'Honneur.

In answer to "H. H. B.," Mr. Mawley's Rose analysis consists solely of those varieties which have been shown at the Metropolitan Exhibitions of the N.R.S. during the last four years. The fact of the Rose above mentioned not appearing in the list of decorative Roses (p. 393) merely shows that it was not exhibited on those occasions. The variety, issued in 1896, was not held to be worthy of a place in the N.R.S. catalogue of 1902, and I confess that I do not know it, being quite unable to keep in touch with all the new decorative Roses. But good Roses do get omitted sometimes from the best catalogues, and "H. H. B." is a rosarian whose word should carry quite as much weight as mine.—W. R. RAILLEM.

A Gardeners' Association.

On reading in last week's Journal about the proposed head gardeners' association, I concur in the formation of such, yet may I ask, What would be the qualifications required to become a member? Would it be exclusively for those at the very top of the ladder, or for all those, like myself, who are head of four? I entered the profession with the aim of one day rising to the top; but may I ask, How can I win upward? My own answer would be, that help could be derived by forming such an association, which might hold tests to show that a member is well up in the practice and theory of the craft, and the best men to be recommended for high places. The article under the heading of "Single-handed" in a recent Journal (page 395), seems to me to be exactly the state of gardening as it is. If only we, as a body, could raise the position of gardeners to the level we ought to have, by means of an association, I, for one, would go in heart and soul with it.—HAMPSHIRE.

Sub-irrigation.

It would seem that sub-irrigation is hardly practised in this country, and I would like to hear of its successful application on either a large or small scale. From what I can gather, it was first heard of in 1890, when the Ohio Experimental Station published the results of its investigations in this direction.

The system consists in introducing water from under the soil. It must be remembered that "bench" cultivation is very largely practised in the United States; that is, a system of planting-out in benches filled with soil, in place of pot culture. The water, then, is introduced underneath, either by the use of porous tiles laid at intervals throughout the base of the bench, or by constructing the bench so as to form a shallow, water-tight tank, in the bottom of which are placed porous tiles. These are of various forms, the principle in every case being that they form a number of canals.

The first cost is considerable, and unless the watering is undertaken by a careful and experienced man great harm can be done. But provided the outlay can be made, and that proper thought is given to the mechanical operations, the final results appear to be all in favour of sub-irrigation. The soil does not become so hard or beaten down in consistency as is the case where the watering is down from above (generally from a hose). A more friable tilth is surely a gain.

A further good is obtained from the consistent, even warmth emitted from the cement and tiles at the bottom. These absorb the heat (which is sometimes too violent) and pass it gradually

upward through the soil. When the heat is turned off, or may have run low, these tiles remain warm, thus tending to the more regular and steady growth of the plants, as well as to the greater production of flowers. It has been said that the floral increase amounts to so much as 25 per cent in the case of Carnations, and that from three to four inches longer stems are produced, that can be got from plants not grown by the sub-irrigation system.—WATCHFUL.

Travelling Grapes.

Referring to a show held recently, a correspondent observes: "Some of the Grapes I recognised as old friends, that have been travelling about since August, and they must have been a little gold mine for their respective exhibitors." A good many exhibits do this, but is this healthy "competition"?

Scottish Horticultural Association.

(Queen Alexandra Chrysanthemum Prize, 1903.)

I have read with interest the notes of your correspondents "Interested," "Anglo-Scot," and "W. W. S." with regard to this prize. and, now that the show is past, one can judge in a fair impartial spirit the pros and cons of the case. I may say at the outset that when I first heard of our Council's proposal to give such a prize I was of the mind of your correspondent "Anglo-Scot" that it was "altogether absurd," and after going over the exhibits in the Waverley Market very carefully, my impression was only deepened, as I think the competition for the above-named prize only proved the needlessness of such a class being made. Those who took first places, I am sure, would have made a creditable show in the open class for twelve vases, and would have had a good "look in" in the classes for six and four respectively. I think the error the Council has made is that they seem to have overlooked the fact that their first object should be how they can best advance the science of horticulture, instead of which they have created a class for certain individuals. Now, no one doubts the ability of our gardeners in the City as growers of the Chrysanthemum, and if one requires proof of this we have only to recall to mind the splendid display of pot plants made in the market last week, which, for cultural skill, I am sure does the growers of such, every credit. Here is a class which should appeal specially to our City gardeners, as it cannot be expected that our friends in the country can bring such plants from a long distance. This is a class which I think might be encouraged.

Just a word to our friend "W. W. S." He says "they are nearly all town gardeners who attend the meetings," and that they deserve a class to themselves "for their trouble." I always thought it was accounted a privilege to attend the meeting; a privilege which, owing to circumstances, is denied our "country cousins."—W. D.

The Golden Flower.

(See Illustrations on pages 492, 493.)

On the two next pages appear illustrations of Chrysanthemums from photographs taken by a *Journal* reader. The six Japanese blooms appear to have been very good, and it will also be conceded that the cottager's dozen flowers do him high credit. The illustrations of twelve incurved Japs are not so refined as could be wished. They were staged at a Southern show by Mr. G. Hall, gardener to the Dowager Lady Ashburton, of Melchet Court, Romsey, and the best, according to the photographer, were W. R. Church, Australie, Ethel Fitzroy, Mrs. Weeks, and General Buller. The set won for the grower (third time winner) a challenge cup; and a gold medal, instead of the cup, is awarded by the Society to commemorate this. The hint as to awarding a medal in place of a cup, might be taken by other societies that deplore the loss of valuable silver cups.

The stand of six (from which we name Bessie Godfrey, Matthew Smith, Lily Mountford, Madame Paolo Radaelli, and Mrs. Carrington) was shown by Mr. J. Lover, Park Road, Cowes, I.W., he being an amateur grower.

Lastly, the collection of twelve Japs from Mr. H. Moore, Frederick Street, Southampton—a cottager—contains A1 flowers of Mrs. Greenfield, Mrs. Coombes, Mrs. G. Mileham, Jane Molyneux, Alice Byron, and Pride of Madford.

Transplanting Trees at Stancliffe.

The Stancliffe Estates Co., Ltd. nurserymen, of Darley Dale, Matlock, the illustration of whose method of lifting and replanting large trees is shown on this page, are the proprietors of the Darley Dale estates of the late Sir Joseph Whitworth, upon which, for the last seven years, they have been developing an extensive nursery business. The Stancliffe Hall gardens, comprising some forty acres, have been noted throughout the country for many years for the excellence of their extensive and choice variety of Rhododendrons, Coniferæ, Hollies, &c., many of the specimen plants having been obtained at considerable cost. These gardens have formed an excellent nucleus for the Stancliffe Estates Co.'s (Ltd.) nursery operations, giving them exceptional advantages, many of the varieties thus available being extremely rare and difficult to obtain. Further, having such a large quantity from which to cut, the grafts and buds for propagating are strong and healthy.

Large areas have been broken up and planted with very choice varieties of Rhododendrons (named varieties, hybrids, and ponticums), "American" plants, evergreens, and deciduous ornamental trees and shrubs, in large variety, as well as forest trees, Roses, fruit trees, &c. The seed beds and propagating houses are very extensive, producing some millions of plants annually. The Company have also large vineries and fruit houses, producing quantities of Grapes, Peaches, and Nectarines.

The removal of large trees is a special feature of their business. They have successfully lifted and replanted some hundreds of such trees, some being as much as 35ft high, and some being taken a distance of ten miles.



Transplanting Trees.

Trees of the Bible.

Most of the arboreal growths which flourished in Bible days are familiar to us in our own country at the present time, yet some we have little or no knowledge of, at any rate from personal experience. Thus among larger trees the Oak, the Poplar, and the Fir and the Cedar were then, as now, plentifully in evidence, while among smaller kinds the Box, the Almond, the Willow, and the Olive (though the latter not of course with us) may be instanced. Several kinds are, as will be illustrated in due course, wrongly translated, or at least representing a different tree to that understood nowadays.

It may be taken for granted that the most typical tree over Palestine generally, was the Olive, while probably the one most renowned in the northern portion was the Cedar of Lebanon. As to the former, it was one of the staple resources of the country, and afforded large results, either by its food and oil or the usefulness of its wood. It was synonymous with plenty and joy, hence "the oil of gladness." Abundance of oil was produced from the little black fruit, for which there was an extensive use among all classes, as among the Italians of to-day. Its wood, being tough and hard, was manufactured in various ways for buildings or making implements.

As we know from imported nicknacks in oriental depôts, it takes a very smooth and beautiful polish. Palestine was well fitted for its growth, as well on the richer portions as on the rugged hill slopes, and even now they render a tolerable account of themselves, though the rich, chalky surface loam has been largely washed away, leaving not much else but the bare rock.

They appear to live a great many hundred years, and it is not impossible some may be existent to-day that flourished in antiquity, especially those about the garden of Gethsemane, hard against the Mount of Olives. Many appear at the present time rather an eyesore or relief, like some of our own old Oaks, of a more prosperous day long past, so gnarled and twisted and lifeless do they appear.

The Cedars of the Lebanon, which grew in large numbers in this district, were specially used, for their durability and excellence, in the building of the Temple. They were the emblem of strength and majesty, and in this sense are employed figuratively more than once in the Psalms of David. Thus "they shall grow like a Cedar of Lebanon." Fine spreading monarchs of their kind they undoubtedly were, and well endowed to be as kings over their fellows, being without question the handsomest of all trees.

The Elm spoken of by Hosea was not this tree, but the Terebinth, or Teel tree, and it is thought by some that it was the Linden tree upon which Judas hung himself. It is scarcely known what is meant by the Bay. Not unreasonably it may be considered merely a general term and as an emblem of luxuriance; some, however, deem it to be the Oleander. Neither is it known what the gopher wood was, though perhaps the Pine. Other misnomers are the Hazel, which was presumably the Almond. This was common enough throughout Palestine, and it may be remembered that Aaron's rod which budded was of the Almond kind. The Myrtle, too, was a frequent growth in many parts, and seems to have attained a considerable height, though the Box, on the other hand, grew to no great dimensions.

We now come to the Sycamore, which is mentioned more than once, but the most familiar passage to us will be that of St. Luke which relates how Zacchæus, being small in stature, made use of one growing by the road-side to climb into on an important occasion, to see the better. But we must bear in mind here, again, it is not what we now call a Sycamore, but one of the Fig kind, though of a wild and unpalatable fruit. Thus it is recorded that the prophet Amos was a herdsman or gatherer of the Wild Fig, apparently for the swine or other cattle. It was found chiefly on the plains of the Jordan. Of firs there were large numbers and of several varieties, the wood of which was used in building and for other multitudinous purposes. Also the Oak was represented by many species, perhaps the commonest being the Ilex or Evergreen Oak, which were very abundant in parts. The tree under which Abraham reposed on the plains of Mamre, in connection with the birth promised to Sarah, is supposed to have been

an Oak, the very tree being confidently pointed out to one at the present day at Hebron, though indeed it requires no pointing out, being a single magnificent specimen, carefully enclosed and evidently of hoary age, yet still flourishing in a remarkable manner.

The writer possesses at this moment an interesting souvenir of it in the shape of a very fine acorn, a fitting offspring of so illustrious a tree, being of a most unusual size, and picked up from under its wide spreading branches some few years ago, while on a visit to El Khalil, or Hebron. It was an Oak which caused Absalom's tragic end, and Deborah, the nurse of Rebecca, we read, was buried underneath one. —J. A. CARNEGIE-CHEALES.

The Liliaceæ.*

(Continued from page 435.)

The tribe Agapantheæ contains two genera of half-hardy plants, which, however, may be successfully cultivated outside in a sheltered position. Agapanthus is a handsome plant of easy culture, producing large umbels on a long, nude scape. Agapanthus umbellatus is the generally cultivated species. It is said to have been cultivated at Hampton Court as early as 1692. There are four varieties—umbellatus Mooreanus, a dwarfier form, with more erect leaves; umbellatus Leichtlini, a handsome variety, having large, pale-blue flowers; umbellatus maximus, the largest and handsomest, and there is a white form of this which is desirable, but scarce. The double-flowered umbellatus is of no great merit.

The Tulbaghias are chiefly greenhouse, rhizomatous, perennial herbs, the foliage of which, unfortunately, exudes a distinct alliaceous odour when touched. T. violacea bears erect umbels of violet purple flowers on slender scapes about two feet high. The flowers are very freely produced out of doors in a sheltered position. According to a past Kewite, it should receive nearly aquatic treatment, but the plants on the Palm house terrace cannot be said to receive aquatic treatment, yet they produce flowers freely in July. T. Ludwigiana, from the borders of Kaffir-land, has its outer perianth greenish purple and the inner yellow.

The next tribe (Milleæ) will be treated briefly, for of the five genera included in it two are monotypic, and, with the exception of Brodiaea, they are not generally cultivated. Androstaphium violacea is pretty nearly hardy. It is allied

to Brodiaea, and well adapted for frame culture, yet can safely be grown out of doors. It produces five to six violet coloured flowers in an umbel, borne by a scape 6 inches high, and it is native of Texas.

Also monotypic is Bessera elegans, which, by reason of its variability, has received various specific names. Its flowers are scarlet or white, and attain a height of from 1 to 2 feet, being produced from July to September.

Leucocyrtus, a genus of three to four half-hardy species, natives of Chili, requires the same cultural treatment as Ixia. They produce umbels of white, lilac, or blue flowers in July or August. L. alliacea (lilac) and L. ixioides (white or pale blue) are the best species.

Massonia comprises twenty-five species, natives of S. Africa, which are characterised by the presence of a scarious involucre surrounding the umbel. M. pustulata and M. jasminiflora are the best species. Of the genus Daubenya, aurea and fulva are the most interesting species.

TRIBE 5: HYACINTHEÆ.—Here we have ten genera, many of which are spring-flowering plants, characterised by their racemose, rarely spiked, inflorescence. Dipsacis is a genus closely allied to Galtonia, containing both hardy and half-hardy species. For greenhouse culture D. erythraceum and D. hyacinthoides may be selected; whilst D. filamentosum and D. serotinum are adapted for out-of-doors culture.

For greenhouse decoration during spring and early summer Lachenalia are admittedly of vast utility. The genus contains many species, some with erect and others with drooping flowers. To this



A Cottager's Twelve. (See page 491.)

* A paper read before the Kew Gardeners' Guild by Donald MacGregor.

latter section belong all the popular garden forms. The leaves, which usually number two (although three to four may be produced) are broad, and usually spotted. *L. tricolor*, with green, yellow and red flowers, is the commonest. Its variety *quadricolor* is a more robust form. *L. aurea* is yellow, whilst *L. tricolor aurea* gave the handsome hybrid *Nelsoni*, with flowers of a deeper yellow. *L. pendula* and its variety *aureliana* are at once the handsomest and most distinct of all, producing from twelve to fifteen ruby-red, black-tipped flowers on a raceme.

Veltheimia, a genus of Cape bulbs, have long been in cultivation, and may be aptly described as autumn-flowering *Lachenalias*. The species generally cultivated are *V. glauca* and *V. viridifolia*, the latter a beautiful plant for the greenhouse, and seen frequently.

The Grape Hyacinths or *Muscari* comprise forty species, many of which are adapted for planting as a groundwork for deciduous shrubs, or in the front of borders and in rockeries. *M. botryoides* and its varieties are most frequently planted. More robust, but closely resembling this, is *M. Heldreichii*. *M. armeniacum*, which flowers later, is one of the best, producing racemes of dark blue flowers with white "teeth." The Tassel Hyacinth (*Muscari comosum*) produces fertile and sterile flowers on the same raceme, and its variety "monstrosum" has all the flowers barren, and the inflorescence is formed into a dense tuft of slender ramifications. It is pretty, and ought to be in every collection of spring flowering plants. This species, although introduced as early as 1596, is still less planted than it deserves to be.

Galtonia (or *Hyacinthus*) is best known to us by that handsome autumn flowering species, *candicans*; whilst the species of *Drimia* are rarely cultivated in any but botanical collections. The pigmy of the Order *Liliaceæ* is *Litanthus pusillus*, with thread-like leaves, these decaying before its small, pearly-white flowers are produced. These are borne on scapes about 1 inch high. Grown as clumps in pots, it forms an interesting object in the greenhouse during August.

Coming now to Hyacinths, these are so familiar to all that a description would be superfluous. Of the thirty species, all are natives of the Orient and Mediterranean region, with the exception of three found in tropical and S. Africa. *H. orientalis* var. *albus* is the Roman Hyacinth of gardens, so valuable for forcing. *H. orientalis provincialis*, a native of South France, and *H. orientalis* itself, are the progenitors of all the Dutch or "Garden" varieties. *H. Romanus*, from Italy, is a taller-growing, scentless species, the double white form of which is a desirable plant when forced, to flower at Christmas. The culture of all of them may be classed under two headings, (1) those grown outside; (2) those grown in pots. Number 1 should be planted as early as possible in October. Plant from 6 to 8 inches apart, and to a depth of not less than 4 inches, in a deep, rich loam. Those intended for pot culture should be potted, if possible, in August, the pots being plunged in ashes till they become filled with roots, when they ought to be removed to a cold frame until required for forcing. Their culture in glasses is so common as to require no comment. Some cultivators who use them largely as pot plants for the decoration of drawing rooms employ a compost of moss



Six "Japs" from the Isle of Wight. (See page 491.)



A Dozen Japanese-incurved. (See page 491.)

and charcoal, which, if properly treated, is very effective, as at the time of flowering the moss forms a lovely green cushion-like mass in the pots.

And now to *Chionodoxa*: for planting under deciduous trees and shrubs, or as edgings to shrubberies, beds, or borders (but not for naturalising in grass) these sweet harbingers of spring, together with *Puschkinia*—whose rotate perianths are so much alike—may be treated as one. *C. Lucilæ* and its varieties *sardensis* and *gigantea* are the most familiar to gardeners, whilst *Puschkinia scilloides* is also a little gem. *Chiono-Scilla Alleni* is an interesting plant, being a bi-generic hybrid 'twixt *Scilla bifolia* and *Chionodoxa*.

The *Scilleæ* tribe begins a new section—the polyphyllous, characterised by having the segments of the perianth free to the base. This series is represented much more numerous than the gamophyllous, perhaps not by generic, but conspicuously by specific types. The tribe contains 198 species, seventy-two belonging to the Old World, thirty-two to the Cape, and a few outlying species are found in Hindustan, China, and Japan.

Urginea, the first genus of this tribe, is universally known through its species *maritima* (syn. *U. Scilla*), the "Squill" of commerce, largely used in medicine. Do not mistake it for the Squill of spring beds. The bulbs are frequently as large as a child's head, and found 100 miles inland. The name, *U. maritima*, is rather a fallacious appellation. Then we have *Eucemis*, a genus of nearly hardy, and very handsome, plants, thriving in a deep loam, and giving a succession of blooms from March to November. The following are selected: *E. undulata*, *nana*, *amaryllidifolia*, and *punctata*, the latter with its varieties. *Whiteheadia*, which is nearly allied, is rarely cultivated.

Of *Scilla* (English—SQUILL) we have many familiar forms: *bifolia*, *siberica*, and *amœna*. These are the earliest, and are succeeded by the ever-present English Blue bell (*Scillanuthans*), or *festalis*, of which both the white and rose-coloured varieties are desirable. Among the early summer flowering ones *hispanica* and its many varieties are the most serviceable. All the half-hardy forms may be started in pots, and planted out when the temperature is suitable, thus securing a greater variety. The same applies to *Ornithogalum*, of which genus we have three distinct types. The first is presented by *O. arabicum*, in which the colour is uniform, and the veining fan-like and inconspicuous; the

second by *O. umbellatum*, which has a broad, laxly, many-nerved dash of green down the back of the petals, leaving only a faint white margin. The third type is represented by *O. narbonense*, in which there is only a distinct, narrow green band down the keel on the back. *O. umbellatum* and *narbonense* are the best of the hardy white flowering species. *O. pyrenaicum* is a hardy yellow form, called "Bath Asparagus," the immature flower stems having been sold as French Asparagus by the inhabitants of Bath! *O. thyrsoïdes* (yellow) and *arabicum*, a fragrant white, with a black centre, may be mentioned among the half hardy forms. *Drimiopsis*, *Camassia* and *Albuca*, each a distinct genus, concludes this tribe. *Albuca* is distinguished by having its segments in two series, three unfolded and three closed over the essential organs.

(To be continued.)



Bottling Fruit—A Neglected Industry.

A lecture on this subject was given before the Croydon and District Horticultural Mutual Improvement Society on Friday, November 6, by Mr. R. B. Leech, of Wood Hall Gardens, Dulwich. In his opening remarks he alluded to the great waste of fruit which occurs in years of plenty, when perhaps, if the knowledge of preserving became more widely circulated, there would be ample supplies of this valuable commodity for years of famine such as we are experiencing this year, and instead of relying on the foreigner to supply our wants we could well save this expenditure by keeping a good stock of the home made article. The first thing to understand was that decay is carried on by bacterial organisms. Therefore, when commencing to preserve fruit we have to combat this lower form of plant life. The best vessels for bottling, he explained, are some made expressly for this purpose. They are wide at the neck to admit the fruit, and fitted with rubber rings and screw capsules, so that all air is excluded from the fruit when properly sterilised. The vessels are filled with fruit and a syrup made of one pound pure cane sugar, over which a quart of boiling water has been poured, added, and the whole allowed to cool, so that three parts of the fruit in each bottle has been covered. The capsule should be slightly screwed down and the bottles placed in a boiler with cold water reaching half-way up the bottles. The water should then be gradually brought to a heat of 160deg, and kept at this temperature for from ten to thirty minutes, according to the size of the fruit. The maximum time would be sufficient for most fruits that are fairly ripe, although the lecturer recommended using fruit that is not too ripe. The capsules must then be screwed down perfectly tight, and the bottles allowed to cool, being careful not to give them too severe change of temperature, as that might cause them to crack. The bottles could then be stored away for some length of time, and to verify this he exhibited some fruit that he had treated with this process some three and four years ago, and which was perfectly sound. He also dwelt on making jellies, preserved meat and vegetables, adding that during his experience, which extended back about sixteen years, he had found the instructions given in every way satisfactory.

Hints on Pine Culture.

Successional plants succeed best in span or three-quarter span—roofed pits or small houses properly ventilated, for young stock often suffer irreparable injury at this season from being kept too close and warm, also from being crowded and far from the glass, the plants being drawn and weakly. A temperature of 60deg at night and 65deg in the daytime will keep all young plants gently progressing, admitting a little air at the top of the house at 65deg, leaving it on all day, but not to lower the temperature below that point, and when the sun raises the temperature to 75deg a free circulation of air should be allowed. The bottom heat should be kept steady at 80deg. Avoid anything approaching a damp atmosphere; moderate humidity only is needed at this time of year. Apply water when the plants become dry, and then afford a thorough supply of weak liquid manure. It is essential that the plants be kept well up to the glass and be given plenty of room.

Suckers ready for starting now should be kept until March, and if there is likely to be a scarcity of suckers any recently potted may be retained in 5in pots, affording them a light situation in a rather narrow pit, with a temperature of 55deg at night and a slight bottom heat, keeping them rather dry. Take every opportunity of collecting Oak and Beech leaves, and whenever favourable push forward whatever may be necessary, in the renewing or augmenting the fermenting beds, effecting this without giving a check to the plants.—PRACTICE.

Figs.

SUCCESSION HOUSES.

Prune the trees when the foliage has fallen. Shoots which have reached the limits of the trellis must be cut back to where the succeeding shoots start, in order that they may occupy their places in the coming season. Cut away all elongated spurs, reserving, however, as there is room, a few of those that are short-jointed and fruitful. Loosen the trees from the trellis, thoroughly cleanse the woodwork with soap and water, the glass with clear water, limewash the walls, adding a little sulphur, and wash the trees with soapy water, afterwards dress-

ing them with an approved insecticide, avoiding those containing substances injurious to the bark. Tie the trees to the trellis, leaving sufficient space in the ligatures for the swelling of the branches. Lightly point the border, remove the loose material, supply fresh loam with a sprinkling of bonemeal, and scatter a few sweetened horse droppings on the surface. Ventilate freely in mild weather, only closing when frost prevails.—GROWER.

Apple Imports.

It is expected that this year the imports of Apples from Canada will reach the unprecedented total of 1,500,000 barrels. This will be about half a million barrels in excess of the previous record, and will form a high watermark which will take some beating in the future. At the same time it can scarcely be said that the limit of importation of the fruit can be reached when picked Canadian Apples are now selling in some of the London fruit shops at as much as threepence each. Something like half a million barrels have come from Nova Scotia alone, and an instance of the enterprise of the Government of that province is afforded by the announcement now made by Mr. Howard, the Agent-General, who states that specimens of the exhibition of Nova Scotia Apples now on view at the Crystal Palace will be loaned to local collections on application to his London office. These Nova Scotian Apples at the Crystal Palace are admirable in size, weight, and high colour.

West End Fruiterers—A Growing Trade.

The high-class fruit and flower shops in the West End are paying businesses at present, the profits of such trades having much improved of late years. Twenty-five years ago it was generally the custom for wealthy and fashionable people to have their fruit and flowers sent up to their London residences from their country homes, but nowadays people find it more convenient to order their fruit in London, which, of course, benefits the London fruit merchant very largely. Grapes at 10s. per pound and Pears at 2s. 6d. each are a mere jot in the housekeeping expenses of the wealthy Londoner, whilst the development of the high-class restaurant (says the "Western Gazette"), where the dessert costs more than an old-fashioned table d'hôte dinner, has proved a great source of income to the high-class fruiterer, who can now easily afford to pay £1,000 a year in rent for his shop.

Farmyard Manure.

(Concluded from page 443.)

Treatment of Dung in the Field.

To save carting in spring, or to empty the dungstead or the yards, it is a usual practice, in the course of the winter, to form large field storage heaps. Doubtless, in most cases, this practice is thoroughly justifiable, though the fact cannot be overlooked that the opportunities for loss in such heaps are much greater than in a proper dungstead, so that field heaps should only be formed if they are the means of gaining an important end. Where these heaps must be formed they should be placed on firm, level ground, and they should be made as deep and firm as possible. The so-called "draw-heaps," on to which each cart-load is drawn, thereby consolidating the mass, are the best. Subsequently the sides are trimmed up, and the whole should be covered with a layer of soil or ashes about a foot thick. Such a covering consolidates the mass, prevents to some extent ammonia rising into the air, and runs off rain water.

When dung comes to be spread on the land, it should be distributed as equally as possible. Sometimes, unfortunately, one sees great lack of care in this respect. In some districts dung is roughly spread straight from the cart, the finishing touches being subsequently given. In other districts, and more frequently, it is laid down in small heaps about six yards apart. If it is immediately spread, no objection can be taken to the system, though it may be said that if the dung is very old, and especially if it is largely made from moss litter, the spots on which the heaps rest are apt to be left over-manured, and especially is this the case on rough meadows. Too often one sees these small heaps lying for days, and even for weeks, unspread, with the result that the rain washes "the goodness" from the dung into the patches on which the heaps rest. These patches are consequently over-manured, whereas the rest of the field, being supplied with impoverished dung, suffers from insufficient nourishment.

With farmyard manure, even more than with artificials, the farmer should so arrange matters that the quantity of dung at his disposal is distributed over as large an area as is consistent with practical convenience. For instance, twenty tons of dung spread equally on two acres will give a much better return than the same quantity spread on one acre, and yet this rule is often neglected.

As regards the time of year when dung should be applied, much depends on the circumstances of the particular case. By

far the greater quantity of dung goes on to meadows and green crops, and it may be said that in the former case autumn or early winter is the best time to make the application. The complete stocking of the ground with plants obviates much loss of soluble matters by washing. On farms entirely under grass there is no choice but to employ the dung on meadows or pastures, and on such farms it would be bad practice not to cart out all available dung in autumn. Of course, the dungstead will again fill up during winter, and on the whole it is probably better to distribute this additional supply in spring than to leave it in the heap, subject to waste and yielding no return till the following autumn. Late spring dressings, however, unless the dung is very "short"—e.g., dung made with moss litter—interfere with the work of the mowing machine, though this can be avoided by chain harrowing and raking the roughness off two or three months after dressing.

In the case of green crops part of the dung may with advantage be ploughed in during autumn, but only on clean, strong land in a dry district. But if foul and especially strong land has to be cleaned in spring, it will be found that autumn dung, by holding moisture, retards the getting of the land into condition in spring. In any case the work of the cultivator brings much of the dung to the surface, and this, being collected with the weeds, is carted off the land again, or possibly wasted by burning. Farmyard manure ploughed in during autumn will decay more rapidly—and especially so in a mild winter—than if left in the dung-heap, so that a relatively larger proportion will be available for the use of the first crop. But just on this account the succeeding crops will not get so much benefit, and this fact has to be borne in mind in estimating the respective advantages of autumn and spring dressings.

The Board of Agriculture would be glad if recipients of this leaflet would make it known to others interested in the subject. Copies may be obtained free of charge and post free on application to the Secretary, Board of Agriculture, 4, Whitehall Place, London, S.W. Letters of application so addressed need not be stamped.

Societies.

Royal Horticultural, Drill Hall, November 23rd.

The meeting on Tuesday was a small one, and there was no lecture.

Floral Committee.

Present: H. B. May, Esq. (in the chair); with Messrs. C. T. Druery, G. Nicholson, Jas. Walker, R. Dean, J. Green, J. F. McLeod, J. Jennings, G. Reuthe, C. R. Fielder, C. Dixon, C. J. Salter, R. C. Notcutt, C. Jeffries, H. J. Cutbush, C. E. Pearson, C. E. Shea, H. J. Jones, W. P. Thomson, E. H. Jenkins, W. J. James, Chas. Blick, E. Mawley, E. T. Cook, and R. W. Wallace.

Messrs. J. Hill and Son, Barrowfield Nurseries, Lower Edmonton, displayed a fine exhibit of specimen Ferns (Silver-gilt Banksian Medal); and from Messrs. W. Cutbush and Son, Highgate, came a pretty exhibit of alpine and herbaceous plants, backed with Conifers. The chief features were the Tritomas, Schizostylis coccinea, Pernettyas in variety, all beautifully berried, Gentiana acaulis, Crocus hyemalis, Campanula muralis major, and Primroses. They also had Carnations (Silver Banksian Medal).

Messrs. W. Bull and Sons, King's Road, Chelsea, contributed a nice display of Epiphyllum delicatum, whose delicate flowers were much admired.

Messrs. Jas. Veitch and Sons, Ltd., Chelsea, occupied a table running the entire length of the Hall with their winter-flowering Begonias. (Silver-gilt Flora Medal.) From Messrs. Barr and Sons, Covent Garden, came a small exhibit of Nerines, Irises, Schizostylis coccinea, and Solanum jasminoides.

Mr. W. Higgs, gardener to J. B. Hankey, Esq., Fetcham Park, staged sixty incurved Chrysanthemums in thirty-six varieties. Needless to add, they were well up to Mr. Higgs' usual form, and truly wonderful for the late period. (Silver Flora Medal.) Mr. J. Russell, Richmond, made a large exhibit of berried and foliage plants. (Silver Flora.)

Messrs. H. Cannell and Sons, Swanley, filled an entire table with an exhibit of Chrysanthemums, Zonal Pelargoniums, and huge plants of Begonias. The Chrysanthemums included specimen flowers of Bessie Godfrey, Mrs. F. W. Vallis, Daniel Lambert, General Hutton, Godfrey's Pride, and Mytilene. The Zonals were superb, both in colour and the size of the flowers. The Begonias were in 6in and 8in pots, large specimens 2½ft high, and at least 2ft through; marvels of cultural skill. (Silver-gilt Banksian Medal.) Messrs. Thos. Cripps and Son, Tunbridge Wells, arranged a semi-circular group of Poinsettias. (Silver Banksian Medal.)

Messrs. W. Wells and Co., Ltd., Redhill, made a fine display

of specimen and decorative Chrysanthemums. The chief of the large varieties were Miss Elsie Fulton, F. A. Cobbold, Harrison Dick, Terra Cotta, Mary Inglis, W. A. Etherington, Donald McLeod, Dora Stevens, Mrs. E. Thirkell, Dorothy Pywell and General Hutton. In the decorative section: Glorious, Nivette, Yellow Souvenir d'une Petite Amie, Elsie Neville, and Harold Shaw were the most conspicuous. (Silver Banksian Medal.) Mr. Geo. Reuthe, Keston, Kent, staged some pretty Nerines, which included the varieties Mrs. Blick, crispa, and elegans alba.

Orchid Committee.

Present: H. J. Veitch, Esq. (in the chair); with Messrs. J. O'Brien, de B. Crawshay, H. M. Pollett, H. Ballantine, N. C. Cookson, J. Douglas, F. Wellesley, F. A. Rehder, A. Hislop, E. Hill, A. A. McBean, G. F. Moore, F. J. Thorne, J. W. Odell, W. Boxall, W. H. Young, M. Gleeson, H. Little, W. A. Bilney, W. H. White, H. T. Tracy, and J. Wilson Potter.

Mr. H. Whateley, Kenilworth, exhibited about a dozen Cypripediums, the best being C. Leeannum, Burford Lodge variety; C. insigne Harefield Hall var., S. insigne Sanderæ, and C. Leeannum giganteum. Mr. F. Wellesley, Woking, staged two Cypripediums, C. insigne citrinum aureum (a beautiful variety, with the upper lip edged with white), also C. i. Westfield variety (a good form with a nicely marked upper lip). From Messrs. Charlesworth and Co., Bradford, came a choice collection.

Mr. F. A. Rehder, Gipsy Hill, arranged a nice collection of Cypripediums. The plants were well flowered and in good condition. From Messrs. Jas. Veitch and Sons, Ltd., Chelsea, came a collection chiefly composed of Cattleyas. The most conspicuous being C. Portia, a lovely form, a cross between C. Bowringiana and C. labiata; C. Elvina, and C. Ixion. L-c. Decia, and L-c. Nysa were also most striking.

A small group of Orchids came from Captain Holford (grower, Mr. Alexander), Tetbury, consisting of large plants of Cypripediums and Lælio-Cattleyas. The chief forms were C. Leeannum Holford's variety, a plant carrying fourteen flowers; C. insigne Harefield Hall variety, a grand piece, for which a cultural commendation was awarded, also excellent plants of C. i. Sanderæ.

A large and choice collection of Cypripediums came from Messrs. Jas. Cypher and Son, Cheltenham, chiefly of the insigne type, some of the best being C. Leeannum giganteum, a fine piece; C. L. magnificum, C. L. aureum, C. L. Burfordense, C. L. Cypheri (a pretty hybrid), C. Leonia, and C. insigne Wallacei, though there were several others worthy of mention.

Messrs. Hugh Low and Co., Enfield, had a few choice forms such as Cattleya labiata grandis, Lælio-cattleya Decia alba, a good hybrid, with Cypripediums in variety, and a good form of Odontoglossum Harryano-crispum.

ORCHID COMMITTEE MEDALS.—Silver-gilt Floras to Captain Holford and Messrs. Cypher; Silver Floras to F. A. Rehder, Esq., and Charlesworth and Co.; Silver Banksians to Hugh Low and Co.; H. Whiteley, Esq.

Fruit and Vegetable Committee.

Present: G. Bunyard, Esq. (in the chair); with Messrs. W. Bates, S. Mortimer, J. Cheal, A. Dean, W. Fyfe, O. Thomas, G. Reynolds, J. Jaques, J. Willard, G. Norman, J. McIndoe, A. H. Pearson, G. Wythes, and H. Markham.

Mr. F. Cole, gardener to Sir Chas. Russell, Swallowfield Park, Reading, made a nice exhibit of Grapes. The varieties staged were Cooper's Black, Muscat of Alexandria (good in bunch and well coloured), Black Alicante, and Mrs. Pince. (Silver-gilt Knightian Medal.) Messrs. J. Ambrose and Son, Cheshunt, staged four bunches of the new Melton Constable Seedling Grape. Messrs. B. S. Williams and Son, Upper Holloway, staged a nice-looking Savoy named Williams' Conical. Mr. J. Crook, Ford Abbey, Chard, staged two dishes of Seedling Apples; and Mr. H. Crawley, The Grange Gardens, Sevenoaks, also staged a seedling black Grape.

Certificates and Awards of Merit.

Chrysanthemum Mrs. J. Dunn (H. J. Jones).—A fine Japanese variety, described under the awards of the National Chrysanthemum Society's meeting at the Crystal Palace; much whiter on this occasion. A.M.

Chrysanthemum Dorothy Pywell (J. Seward).—Described under the awards of the N.C.S. in this week's Notes and Notices. A.M.

Lady Cranston (W. J. Godfrey).—Described in the awards of the National Chrysanthemum Society, page 487. A.M.

Lælio-cattleya Cassiope (Capt. Holford).—A good form, with pale lilac sepals and petals, the lip purple, with a yellow-veined throat. A.M.

Cypripedium × Queen of Italy (Charlesworth and Co.).—A cross between C. i. Sanderæ and Godefroyæ leucochilum. The upper sepal is pale creamy yellow, white at the top, the lower sepals being spotted, likewise the pouch, though faintly. A.M.

Cypripedium Leeannum, var. Staffordianum (Capt. Holford).—A large, well-formed flower, the upper sepal being white without the spots. The pouch is large and well formed. A.M.

Chelmsford (Essex), Nov. 10th and 11th.

The third show and first attempt at a two days' exhibition was held in the Corn Exchange, and proved eminently successful. Fruit was much below the average; groups of Chrysanthemums were especially well done. Mr. Rixon, gr. to Captain Cruickshank, Springfield, Lyons, worthily won the Mayor's Cup with a well set up arrangement of fine fresh Chrysanthemums and foliage plants, nicely finished off in front. He was closely pressed by last year's winner, Mr. T. Brazier, gr. to Mrs. W. Gray, Phoenix House; 3, Mr. Symonds, gr. to C. E. Ridley, Esq., The Elms; and 4, Mr. A. E. Lockyer, gr. to Mrs. Jupp, Margeretting. In the small group class, Mr. E. Searles, gr. to Mrs. H. Gray, Laurel Grove, was easily 1st; Mr. Elcock, gr. to Colonel Tufnel Tyrrel 2; and Mr. J. Burrell, gr. to W. W. Duffield, Esq., 3.

Amateurs.—The Cruickshank Cup was most deservedly awarded to Mr. Reed, Roman Road, with a most creditable display; Messrs. C. W. Woodward and W. E. Belcher, both of Mildmay Road, were a good 2nd and 3rd respectively. Mr. S. Pragnell, gr. to H. C. Wells, Esq., D.L., Broomfield Lodge, staged a very large non-competitive group of Chrysanthemums right across the hall, set up in serpentine style, terminating in two huge semicircular mounds at the ends, the whole being faced with small bright-coloured Crotons, Draenas, Orchids, and Ferns, and banked up behind with large specimen Palms and other fine-foliage plants. This exhibit won high encomiums, both from the judges and the general public. A large collection of fruit and vegetables staged by the same exhibitor, not for competition, was very highly commended.

Cut blooms.—Open classes: Mr. C. J. Simpson led away with 24 Japanese, which for size, depth, freshness, and colour were grand. This exhibit also gained the N.C.S. certificate for best stand in the show, and the monster F. S. Vallis, 14in across, was the premier Jap. The set comprised Mafeking Hero, F. S. Vallis, Mermaid, Mrs. W. Mease, Godfrey's King, Elsie Fulton, Madame Carnot, and Australie; mid row: Mrs. J. Bryant, Godfrey's Masterpiece, Mrs. Barkley, M. Louis Remy, Chenon de Léché, Edith Tabor, W. R. Church, and Vivian Morel; front row: Madame Herewege, Mr. T. Carrington, Loveliness, George Carpenter, Mrs. G. Mileham, George Lawrence, N.C.S. Jubilee, and Mrs. Coombes. 2, Mr. Rixon. Mr. Simpson was again 1st in the district 24 Japanese with another magnificent set of blooms, almost duplicates of the preceding. Mr. Watmore, gr. to E. Bristowe, Esq., Baddow Park, 2; Mr. W. Wright, gr. to Gerald Ridley, Esq., The Limes, Broomfield, 3. Mr. Brazier was 1st for 12 incurveds, showing neat blooms. Mr. Simpson was 1st for 6 incurveds; 2, Mr. A. Reeve, gr. to Lady Alice Howard, Woodham Walter. Both singles and pompons were well shown, and Mr. Simpson led in the former and Mr. Brazier with the latter. In the amateur open classes, 12 Japanese, Mr. Reed was 1st. Mr. Reed led also with 12 incurveds; C. H. Curtis in this stand was awarded for best incurved in the show. Mr. Rippon had much the best 12 Japanese grown in the district. This stand was adjudged the best stand shown in the amateur classes, and gained the N.C.S. certificate. It comprised fine blooms of George Lawrence, W. R. Church, Bessie Godfrey, Mrs. Greenfield, Lily Mountford, Godfrey's King, Lord Ludlow, and Alice Byron.

Mr. Searles showed the best collection of fruit; Messrs. Siteh, Falconer, Searles, and J. Tunbridge the best vegetables. A long table of ladies' floral decorations was a good feature. Mrs. Leech 1, Miss A. Marriage 2, Miss Luckin 3, were winners.

Nottingham and Notts., Nov. 13th and 14th.

This society held its annual show on November 13 and 14. The number and quality of the exhibits marked it as the best show yet held. This was exceedingly gratifying, as local growers had an immense number of exceptionally good blooms destroyed before being fully developed. The judges—Mr. Weeks, gr. to Lady Byron; Mr. Tallack, gr. to E. M. Mundy, Esq., of Shipley Hall; and Mr. C. Mee, of Nottingham—were occupied five hours in making their awards, which, by the way, gave complete satisfaction. The opening ceremony was graciously undertaken by Mrs. John Robinson, of Worksop Manor. The president, Mr. Alderman Bennett, took the chair, and was supported by John Robinson, Esq., the Mayor (Councillor A. Page), and the Sheriff (Councillor Fleeman), of Nottingham, together with numerous aldermen, councillors, ladies, and gentlemen of the city and county. In his opening remarks the president made the welcome announcement that John Robinson, Esq., on behalf of Mrs. Robinson, had promised an exceedingly handsome donation to the society.

The exhibits were most artistically arranged, under the skilful superintendence of Mr. Arthur Staton, and the hall was transformed into a veritable bower of floral beauty. The centre of the hall was occupied by a gigantic Palm, lent by Mr. C. Mee, and was encircled by bouquets, epergnes, and sprays, the whole being surrounded by exhibits of fruit, the quantity, quality, and appearance of which caused people to wonder if the year 1903 had really been the bad fruit season it has been proclaimed.

An exceedingly well-coloured exhibit of cooking Apples attracted special attention, but it failed to gain an award owing to some of the fruit having been bruised in transit. The front of the orchestra was beautified by a number of florally decorated fire-places, one of the new features of this year's schedule. The attractiveness of the show was enhanced by a splendid non-competitive collection of fruit, vegetables, and flowers staged by Mr. Weeks, gr. to Lady Byron, and for which collection the committee awarded a special gold medal. Mr. Hemstock, gr. to A. Orgill, Esq., of Nottingham, assisted in adding to the floral beauty by putting up a fine collection of resplendent Orchids. The attendance was a capital one, the gate constituting a record, and altogether the secretary, Mr. G. E. Skelhorn, is to be congratulated on the success attending his first year of official connection with the society.

Of the competitors, the gr. to W. A. H. Bass, Esq., of Burton (Mr. Richard Nisbett, who has met with such constant success at the various provincial shows recently), was very successful. Entering in three classes, he secured two 1sts and one 2nd, and also the award for the champion Japanese bloom with Princess Alice de Monaco. In addition, he gained the National Society's certificate. The winner of the prize for the champion incurved bloom was Mr. W. Whitehead, a local artisan. Mr. J. H. Goodacre, gr. to the Earl of Harrington, was extremely successful, gaining eight 1sts, two 2nds, and two 3rds. Mr. G. Wright gained three 1sts and six 2nds. Mr. R. J. Walters, gr. to Mrs. Leavers, of Nottingham, gained one 1st, five 2nds, four 3rds, one 4th, and carried off the Championship Shield offered by Messrs. Toogood and Sons, of Southampton; whilst Mr. W. Parkin, a local artisan, and exhibitor for the first time, gained the Toogood bronze medal, and also the National Society's certificate with three 1sts, two 2nds, five 3rds, and one 6th. Mr. Yarnell, gr. to Mr. Turner, of Nottingham, entering in six classes, gained four 1sts and one 4th. Mr. John Burley, another local artisan, gained two 1sts, four 2nds, two 3rds, and three 4ths, and Messrs. Toogood and Sons' certificate. Mr. T. Barratt, a local florist, two 1sts, two 2nds, and three 3rds, and there were a few other prizewinners.—S. D.

Sparkhill, Nov. 14th.

The first Chrysanthemum Show of the Sparkhill and District Amateur Horticultural Society was held in the handsome Streetford Road Council Schools on the above date, when a really meritorious exhibition was presented. The show was under the management of the urbane and energetic hon. sec., Mr. W. W. Staples, and his committee. The show was opened by the president, J. J. Platter, Esq., who, though blind from the sixth year of his age, delivered a most eloquent address. The venerable gentleman afterwards was conducted round the show, and evinced the greatest interest in the qualities of the exhibits described to him. The cut blooms in the open classes were of high quality, especially a collection of Japs sent by Mr. R. Jones, gr. to C. A. Smith-Ryland, Esq., Barford Hill, Warwick.

Belfast, Nov. 17th and 18th.

SUMMARY.—The annual autumn show of the Ulster Horticultural Society, held in the St. George's Market, Belfast, proved most successful, fine weather for once in a way adding considerably to the comfort of the numerous visitors. The opening ceremony was performed by the Countess of Kilmorey, a large and distinguished company being present, among whom were Lord Newry, Lord Dunleath, the Right Hon. Thos. Andrews, D.L., Sir Otto and Lady Jaffe, Sir Robert Anderson, Mrs. Pirrie, Miss Carlisle, and many other well-known ladies and gentlemen. Considering the unfavourable season for most things there were a large number of entries. Among the Chrysanthemums (which were the principal feature of the show) many excellent exhibits were staged.

CUT BLOOMS.—Twenty vases Japanese, 12 varieties: 1, Captain Stirling, Keir, Dunblane; 2, John Jamieson, Esq., D.L., St. Marnocks, Malahide. Twelve Japanese in vases, 12 varieties: 1, The Countess of Caledon; 2, G. H. Browne, Esq., J.P. Forty-eight blooms, Japanese: 1, John Jamieson, Esq.; 2, Thos. H. Torrens, Esq. Twenty-four blooms, Japanese, distinct: 1, G. H. Browne, Esq.; 2, Colonel the Hon. C. F. Crichton; 3, Lord Dunleath. Twenty incurved: 1, Thos. H. Torrens, Esq.; 2, Lord Dunleath. The entries in all the classes—for cut flowers, plants, fruit, vegetables, farm produce, and butter—were numerous and excellent in quality.

The trade exhibits (always appreciated) were undoubtedly finer this year than ever. The stand of Messrs. Alex. Dickson and Sons, Limited, a winged screen of ivory-coloured wood with panels of green silk, formed a background for the arrangement of a large number of exquisite designs. The central device was striking and ingenious. It was the finest stand in the show, the designer of which is worthy of the highest praise for the make-ups and arrangement.

Upon Messrs. Smith and Co.'s stand also were many beautiful designs, the most striking being a large broken column on a pedestal, made of white Chrysanthemums, with sprays of Ivy

clinging to it. An Irish harp, Shamrocks, crosses, lyre, and some bouquets completed a very creditable exhibit.

Fine exhibits of fruit were staged by Messrs. A. Dickson and Sons, Limited, and Mr. Hugh Dickson, Belmont. Many other worthy exhibits were put up by local firms and from across the water. Space will not allow anything but a note or two of description of the many pleasing features which made this show one of the finest of the season. Suffice to say that a large number of entries, a brilliant company, pleasing music, and good weather combined to make a visit to this show one of great pleasure.—J. W. J.

Dumfriesshire and Galloway, N.B., Nov. 18th.

The new departure of the above society in holding a show of Mums was so far satisfactory that it is to be hoped that an effort will be made to constitute it an annual event. The Drill Hall, Dumfries, is a capital place for such a show, and the turnout of flowers and plants showed that the gardeners and nurserymen of the district are prepared to support it heartily. Cut blooms were very good, and Messrs. Jas. Service and Sons were 1st in the open class for 36 blooms, 18 blooms, and 12 blooms with really fine flowers of great size and finish. In the gardeners' classes for cut blooms there was difficulty in judging in those for 18 Japanese and 12 Japanese between Mr. J. Duff, Threave, Castle-Douglas, and Mr. J. Harcastle, Holm Hill, Dalston, Carlisle; but the judges considered those of Mr. Duff the better in both classes. In the gardeners' cut bloom classes, as a whole, however, Mr. Harcastle took such a good position that he won Mr. H. J. Jones' silver-gilt medal for the winner of most points. Mr. Jas. Henderson, Elmbank, Dumfries; Mr. M. B. McDonald, Langholm; and Mr. R. Young, Gracefield, Dumfries, were the other leading winners in these classes, the latter being 1st for a basket of Chrysanthemums. Plants were good upon the whole for a group. Messrs. Service led; 2nd, Mr. J. Honston, Crichton Royal Institution, who set up a tasteful group of smaller flowered plants. Fruit and vegetables were not so strong as they might have been, Mr. Duff leading with Apples, and Mr. J. M. Stewart with a collection of Pears and Apples. Mr. Houston won for a collection of vegetables, and Mr. J. M. Stewart, Mr. W. Muir, Summerville, Dumfries, and Mr. R. Young, Gracefield, Dumfries, were the other principal winners in these classes. The nurserymen's exhibits were very good, certificates being awarded to T. Kennedy and Co. for plants; W. Middleton and Son for trees and shrubs; Kerr Brothers for new Potatoes of their own raising; Fotheringham and King for Palms; Mr. W. Byers for a table of plants, and also for a table of fruit; and Mr. Jas. Kennedy for plants. Sir M. J. McTaggart Stewart Bart., M.P., opened the show with a most interesting speech.—SOLWAY.

Bristol, Nov. 18th and 19th.

The fortieth exhibition of the Bristol Chrysanthemum Society was held in the Colston Hall on the above date, and was quite up to the average in most respects. The fruit and vegetable classes, as may be expected, were very weak, the fine show of Apples, Pears, and other fruit usually seen at Bristol being missed. Cut blooms were well up to the average, and few finer stands than that with which Mr. F. S. Vallis won have been seen this season. This noted grower, with 36 Japanese, not only won outright the Challenge Vase, but also the National Society's silver medal for the best bloom in the show (a superb F. S. Vallis), and a local prize given for the best exhibit of cut blooms. The 36 were made up from the leading kinds. Mr. H. O. Lord (gr., Mr. May) was 2nd; the Frome Fruit and Flower Company, Mr. Taylor, and Mr. G. Runnacles following in the order named for the remaining prizes. Having previously won the cup two seasons, Mr. Vallis now becomes the possessor of it.

Mr. G. W. Drake led in the principal class for incurved flowers with a meritorious stand, but this section was not by any means up to the usual Bristol form, and one missed several well-known exhibitors. The first prize and silver medal for a group of Chrysanthemums was taken by Mr. J. C. Godwin, his gr., Mr. J. McCulloch, putting a lot of very fine material into a group, the only fault of which is its hard outline and rather crowded condition. Mrs. Vincent Ames, Mr. Howell Davies, and Dr. Eager were other successful competitors in the group classes.

Orchids were particularly well shown, splendidly flowered specimens of *Cattleya labiata* and *Lælia præstans* being noted. Specimen Chrysanthemum plants were very weak, but among the ornamental foliage plants there were a few very fine pieces, notably a grand *Cycas revoluta* and *Croton Victoria* in the 1st prize half-dozen set up by J. B. Woods and Son, of Chipping Sodbury. Specimen Ferns were good, Mrs. Ames leading in the class for 6, closely followed by Mr. C. Godwin. Fruit calls for no special mention, but the table decorations, bouquets, and wreaths were splendid. Mrs. Rogers won 1st for bouquet, and for a wreath was 3rd. More than one experienced florist thought her rather unfortunate in taking only 3rd. O. Dobson and Co. and Mr. Coles were 1st and 2nd here.

Trade exhibits were numerous and fine. Messrs. Sutton and

Sons, of Reading, Garaway and Parker and Sons, of Bristol, Blackmore and Langdon, of Bath, Godfrey, of Exmouth, and Wells, of Redhill, all staged of their best. The Bristol Amateur Society held their annual show in connection with that of the older society, and made a very creditable display in the lesser hall.—H. R. R.

Sutton Coldfield (Warwickshire), Nov. 18th and 19th.

The eighteenth annual show was held in the Masonic Hall on the above dates, and the quality throughout was good. Vegetables in particular were of high merit. Chrysanthemums and dinner-table decorations were prominent features, as also a large collection of well-grown, large Onions exhibited by Mr. Albert Jeffs, gr. to E. Ansell, Esq., Rigby Hall, Bromsgrove. A certificate of merit was accorded Mr. T. B. Grove, Wyndley Nursery, Sutton Coldfield. It is only just to remark that the arrangements of the show were methodically carried out by Messrs. J. N. Brown (secretary) and G. T. Grove, junior, the chairman. There were two groups or banks of Chrysanthemums arranged for effect. For 12 Japs Mr. A. Jeffs won 1st honours with an excellent complement. The 2nd prize by Mr. C. Link with a creditable lot. Primulas were finely staged by Mr. W. Jones, his 12 plants gaining the 1st prize. For 6 table plants, distinct, Mr. J. Bampton secured 1st. The competition for a collection of vegetables, Mr. J. Jones, gr. to L. Turner, Esq., was the victor with a capital lot; 2, Mr. R. T. Parker, The Gardens, Moor Hall.

York, Nov. 18th, 19th, and 20th.

SUMMARY.—In the Exhibition Building the annual show was held, and was in every way a pronounced success. The building is one of the best in the United Kingdom for a display of this kind, being light, elegant in appearance, and providing ample space to display the exhibits thoroughly, and, at the same time, giving ample space to view them. Cut blooms were, perhaps, not quite so numerous as in some seasons past, which is not a singular case this year. What they lacked in quantity was amply made up in quality. Groups of Chrysanthemums and miscellaneous subjects were—as they always are here—of a first-rate order of merit.

The management here is quite of the best, under the careful supervision of Mr. F. Oman, the courteous secretary, aided by an enthusiastic committee of practical men. Mr. W. Higgs was 1st for 36 blooms, half incurved and half Japs.; and Mr. J. Folkard came second. Mr. Higgs also led for 18 incurveds.

CUT BLOOMS created the most interest, many handsome prizes being offered. The leading class was that for 36, half to be incurved and the remainder Japanese in not less than 12 varieties of each, nor more than two of any one variety. To the "Citizens' Challenge Prize, valued at £20, £10 was offered for the premier exhibit. Four competed, making a fine display. Mr. W. Higgs, gardener to J. B. Hankey, Esq., Fetcham Park, Leatherhead, was an easy 1st prize winner by the great superiority of his incurved blooms, which were large, shapely, and well staged. The Japanese were lighter, still possessing high quality. The names were:—*Incurved*: Duchess of Fife (2), Ralph Hatton, W. Higgs (2), Mr. Judson, G. W. Matthew, Miss Nellie Southam, Frank Hammond (2), Mdle. Lucie Faure, Egyptian (2), C. H. Curtis, E. Lock, Ma Perfection, Mrs. B. Hankey, and Mrs. W. Higgs. *Japanese*: Bessie Godfrey, Godfrey's Pride (2), Mrs. J. Lewis, W. R. Church (2), Lord Ludlow, Mafeking Hero, Le Grand Dragon, Marquis V. Venosta, Mrs. Mease (2), Kimberley, George Penford, Mrs. Mileham, General Hutton, Mdme. P. Radaelli, and Mrs. Hamwell. Mr. J. Folkard, gr. to Lady Walker, Sand Hutton, was a good 2nd, with handsome Japanese, but smaller incurved. Mr. W. Mease, gr. to A. Tate, Esq., Downside, Leatherhead, was a close 3rd.

For 18 incurved, Mr. Higgs, with an exceedingly fine stand of heavy, well finished blooms, was an easy 1st prizetaker. Especially noteworthy was Mrs. Judson, W. Higgs, Duchess of Fife, Ialene, May Phillips, Frank Hammond, and Comtesse d'Estoile. Mr. Mease was a good 2nd; Mr. J. McPherson, gr. to Lord Londesborough, Londesborough Park, Market Weighton, a close 3rd; five competed. The latter won the premier award for 12 incurved, with medium-sized neat blooms, such varieties as Duchess of Fife, Fred Palmer, J. Agate, Louisa Giles, Hanwell Glory, C. H. Curtis, and Baron Hirsch were well represented. Mr. G. E. Thomas, gr. to the Marquess of Ripon, Studley Royal, Ripon, was a close 2nd. Mr. Folkard 3rd. Mr. McPherson also won for 6 incurved distinct. Mr. Folkard a close 2nd, with Mr. Everard, gr. to Mrs. Gutch, Holgate Lodge, York, 3rd. For 6 incurved, any one variety, Mr. G. W. Richardson, gr. to G. W. Whitehead, Esq., Deighton Grove, York, was 1st with small neat blooms of Hanwell Glory, Mr. McPherson following with Topaze Orientale, large but loose. Mr. A. W. Whitlock, Monkton Lane Nurseries, Ripon, 3rd with C. H. Curtis.

Japanese made a good display, so numerous were they. For 18 distinct Mr. McPherson was the most successful, with a stand

of heavy blooms, richly coloured and well staged. Mrs. Barkley, M. Chenon de Leche fine, Vivian Morel, Mrs. J. C. Neville, Bessie Godfrey, rich, Florence Molyneux, Ethel Fitzroy, Mrs. Greenfield, Gustave Henry, Mrs. Mileham, General Hutton, J. R. Upton, W. R. Church, and Mdme. P. Radaelli as the most noteworthy. Mr. D. Williams, gr. to the Earl of Feversham, Duncombe Park, Helmsley, 2nd with a capital set. Lily Mountford and Mrs. F. W. Vallis were exceedingly good. Mr. Mease 3rd with smaller blooms: five competed. Mr. McPherson followed up his previous success by securing, amongst 8 competitors, the premier award for 12 varieties. W. R. Church, Genl. Hutton, Mrs. Barkley, Mrs. Mileham, Mdme. Heneage, Mrs. Greenfield and *Australie* were extra fine. Mr. Williams followed closely with *Princess de Monaco*, exceedingly fine petal, as the most noteworthy; Mr. Folkard 3rd. Messrs. McPherson, Williams and Folkard secured the prizes for 12 Japanese distinct in the order here given, all staging most creditably. For 6 any white variety there was keen competition. Mr. D. Williams, with Gustave Henry in splendid condition, secured the leading award. Mr. McPherson 2nd with the same variety. Mr. J. Adams, gr. to Miss Chapman, Otley Road, Harrogate, with *Nellie Pockett*. There was keen competition for 6 any one yellow variety, Mr. McPherson winning with Mrs. Greenfield, especially rich in colour, Mr. Williams, with medium sized *Edith Tabor*, following. Mr. R. Harrison, gr. to — Monkhouse, Esq., *The Laurels*, Bishopsthorpe, 3rd. Six sets of six, any one variety except white and yellow, were present in that section. Mr. McPherson, with large but rough examples of W. R. Church, won the premier place. Mr. Folkard, with Mrs. Mileham, 2nd.

Single flowered varieties, in sprays of three each of six distinct, made an attractive class. Messrs. Theakstone and Sons, Hull Road, York, won with a charming display. Mr. A. W. Whitelock, Monkton Lane Nursery, Ripon, 2nd. Mr. Murchison, gr. to J. B. Grotrian, Esq., *Wetherby*, 3rd. The last-named was the only competitor for 12 *Ancione* flowered, he winning the premier award with excellent examples of *Descartes*, *John Bunyan*, *Sabina*, and W. W. Astor. Decorative varieties in sprays of three each were a great feature, as they always are here. For twelve vases five competed. Messrs. Theakstone and Son were distinctly ahead of all others with high quality flowers of *Ernest Fierens*, *Soliel d'Octobre*, *Lizzie Adcock*, *La Triomphante*, *Bessie Chapman*, *Source d'Or*, *Mytchett Beauty*, *Pride of the Market*, *Eynsford White*, and *Caprice du Printemps*. Messrs. G. Longster and Son, Beverley Nursery, Malton, was 2nd. F. Styan, Esq., York, 3rd. For a basket of Chrysanthemums arranged with their own foliage no fewer than ten competed, making a grand display. Mr. J. Yates, 51, Bewley's, Grove Street, York, was 1st with an effective combination of large and small flowered varieties. Mr. J. S. Holmes 2nd with a grand mass of *Source d'Or*. Mr. Styan 3rd. For a vase arranged with Chrysanthemums suitable for a drawing-room there was keen competition. Mr. J. T. Holmes, Clifton, York, was 1st with *Source d'Or* splendidly arranged. Messrs. Longster and Sons 2nd. Local classes and the amateurs' division were well filled with creditable produce. Space, however, forbids a detailed account.

PLANTS.—The classes for groups of various kinds always attract much attention here, so handsome are the prizes and good the results. For a group of Chrysanthemums interspersed with foliage plants arranged for effect in 100 square feet, £10 was offered for first prize. Three competed, the premier award going to Mr. W. Townsend, gr. to E. B. Faber, Esq., M.P., Harrogate, for handsome Chrysanthemums and good foliage plants, but exposing too many of the stakes and pots in arrangement. Mr. G. Jarvis, gr. to Mrs. Whittaker, Cliffe House, Bessie, 2nd, with a much better arrangement, but lacking in quality of the Chrysanthemums. Mr. Cottam, Alma Gardens, Cottingham, 3rd. For the best decorated pillar, 17ft high, with Chrysanthemums and foliage plants, on a base of 8ft by 6ft, Messrs. R. Simpson and Sons, Brook Street, Selby, were awarded the premier place with a pleasing arrangement of single flowered Chrysanthemums up the pole, nicely interspersed with *Crotons* and *Palms*. The Chrysanthemums at the base, however, were a little small. Mr. Jarvis 2nd.

Much the best group, however, in effect was one from the Rev. G. Yeats, Heworth Vicarage, but which unfortunately was not high enough; the judges had to, however reluctantly, disqualify it. A similar class in some respects was that for a decorated pillar with a mirror in the centre. Here a fine effect was produced by the three exhibitors. Messrs. R. Simpson and Son were an easy 1st with a light yet effective arrangement of single Chrysanthemums, finely coloured *Crotons*, with an exceedingly fine basket of *Asparagus Sprengeri* at the top. The whole was pleasingly designed and carried out. Mr. Cottam 2nd. Mr. J. Key, Clifton Nursery, 3rd. For a group of Chrysanthemums arranged for effect in 80 square feet, Mr. J. Pettinger, Franklin Square Nurseries, Harrogate, was easily 1st with plants ranging from 1ft 6in to 5ft in height, well clothed with foliage, and carrying good blooms. Mr. J. W. Hields, Front Street, Acomb, York, 2nd.

Specimen plants were not numerous. Mr. Everard was easily first for four incurveds, showing C. H. Curtis, Mrs. G. Rundle, G. Glenny, and Lord Wolseley. Mr. J. W. Backhouse 2nd. For 4 Japanese Mr. Everard also won with good examples in every way of John Shrimpton, Swanley Giant, Lady Hanham, and *Souvenir de Petite Amie*. Mr. T. Mitchell, *Dernier House*, Dringhouses, York, 2nd. Single flowered varieties were well staged. Mr. Everard, with a freely flowered plant of Miss A. Holden, won for a specimen, as also he did for one Japanese with a capital example of Lady Hanham. Amateurs staged well, many meritorious examples being seen.

For the best decorated dessert table with Chrysanthemums only and foliage, Miss Whitehead, Deighton Grove, York, won the coveted award for an arrangement of single flowered pink blooms effectively disposed. Miss Hall 2nd. Mrs. Palmers 3rd.

Messrs. W. Cutbush and Son, Highgate Nurseries, had a gold medal awarded for a fine display of *Azalea mollis*, *Lilium lancifolium roseum* and *album*, *Carnations*, &c., all most beautifully arranged.

Messrs. Clibran and Son, Altrincham, had a capital display of single Chrysanthemums and *Celosias*. Among the former Miss F. Wilcox (white, flushed pink), Miss T. C. Warden (pure white), Mrs. R. M. Parker (clear yellow), and Mrs. E. Roberts (lilac) were conspicuous.

Edinburgh, Nov. 19th and 20th.

SUMMARY.—This association dispenses with stands, cups, and tubes, and is the pioneer of the vase method of staging Chrysanthemum blooms. No fewer than 611 vases were required, and 1,833 blooms were staged. So much as £340 were paid for the band for the three days. Mr. D. Nicol, of Forgandenny, won 1st for the 20 varieties of Japs. 3 of each, in vases, Mr. T. Lunt coming second, and Mr. J. Beisant third. The "Queen Alexandra Prize" was awarded to flowers which were inferior to many stands in the open classes. The display was certainly inadequate for the prizes. Nine competed for the Scottish Challenge Cup, and Mr. W. Nicholson, Strathallan Castle, was 1st. The show was of the highest order of excellence.

It is safe to say that the Scottish Horticultural Association was the pioneer society of the vase method of displaying the large Chrysanthemum blooms by offering valuable prizes. It must be pleasing to that society to find that the show recently held under that management is still the best in the United Kingdom. No society can boast of such a display as that held in the Waverley Market on the dates named. No fewer than 611 vases were required to contain the blooms, and as three blooms in each vase was the rule, no fewer than 1,833 blooms were staged in this manner alone. This association, too, has discarded the stands, cups, and tubes, and without regret; thus they are pioneers in this respect also. The show in question was on the whole a magnificent display in a capacious building such as is the Waverley Market Hall. No other site is equal to this for accommodating the vast numbers who flock to the shows annually. The executive deserve well of the public, as it would be difficult to find a more enterprising body. For instance, what other society would care to pay £340 for music for the three days? The society is managed by practical men, under the presidency of Mr. McHattie, the city's gardener, ably aided by efficient committees, and an admirable secretary in Mr. Loney, and a capable treasurer in Mr. Mackinnon.

VASE CLASSES.—No fewer than twenty classes are provided. The principal one is that for 20 varieties of Japanese, three blooms of each, and for which the handsome prize of a piece of plate value £20, and £10 in cash, is offered for the first prize, with sums of £20, £15, £10, and £5 in four other prizes. Such encouragement as this is deserving of success in competition. On this occasion five competed, making a fine display. Mr. D. Nicol, gr. to J. W. Bell, Esq., Rossie, Forgandenny, secured the coveted award with handsome, massive examples of the following: H. Stowe (very fine), Duchess of Sutherland, Gustave Henry, Mrs. Mileham, Miss Olive Miller, F. S. Vallis, Madame Paolo Radaelli (deeply built), Miss A. Byron, Lord Ludlow (magnificent), Nellie Pockett, Mrs. F. W. Vallis (richly coloured), Lady Conyers, Mildred Ware (rich), Mrs. Barkley, Mrs. J. Bryant, Bessie Godfrey, Madame Cadbury, Mrs. G. Lawrence, J. R. Upton, and Edith Shrimpton. Mr. T. Lunt, gr. to Captain A. Stirling, Keir, Dunblane, was a good 2nd, with not too large, but handsome, fresh examples, showing much quality. Especially fine were Bessie Godfrey, Mrs. Mileham, Madame Herrewage, Madame Cadbury, Elsie Fulton, and Mrs. E. Hummell. Mr. J. Beisant, The Gardens, Castle Huntley, was an exceedingly close 3rd, with massive blooms, some a trifle stale. Mrs. F. S. Vallis was a monster, fully 11in in diameter. Henry Perkins (very rich), Florence Molyneux (massive), Mildred Ware, and George Penfold were especially noteworthy. Mr. J. Martin, gr. to Mrs. Swinburn, Corndean Hall, Winchcombe, Gloucestershire, 4th. Mr. R. Kenyon, gr. to J. R. Twentymann, Esq., Monkham, Essex, 5th.

What is known as the "Queen Alexandra" prize was this year offered for 12 vases Japanese, three of each variety in a vase, and for which the sums of £15, £10, £7 10s., and £4 were

offered as encouragement to growers within the municipal boundaries of Edinburgh and Leith. Five competed, but the display was certainly inadequate for the valuable prizes offered. The premier award was certainly below, in point of quality, many stands in the open classes that failed to obtain an award. Mr. D. Cavanagh, gr. to J. C. Oliver, Esq., Murrayfield, won the 1st prize with small blooms of popular varieties. Mr. J. Fraser, gr. to G. B. Turnbull, Esq., Kilravock, 2nd; Mr. W. Lamont, gr. to Rev. R. M'Nair, Brizlee, 3rd. Five competed.

No fewer than nine competed for the Scottish Challenge Cup and £10 as 1st prize, with handsome prizes for four others. For 12 vases Japanese, three blooms in each, distinct varieties, Mr. W. Nicholson, gr. to E. Whitelaw, Esq., Strathallan Castle, Machany, quite easily won the coveted award with blooms quite equal to any in the show. The varieties were Princess Brancova (9in deep), Madame Paolo Radaelli, Mafeking Hero, Mrs. J. Bryant, Calvat's Sun, Bessie Godfrey, Miss Olive Miller (very fine), Mrs. Mileham, Kimberley, Florence Molyneux, J. R. Upton (massive), and Australie. Mr. J. H. Cumming, gr. to Lady Stewart, Grantully Castle, a good 2nd. Mr. W. J. Norman, gr. to the Earl of Mar and Kellie, Alloa House, 3rd.

The following classes are open to private gardeners and amateurs. For six varieties, three of each, nine took part, the best coming from Mr. Beisant, even, high-class blooms of the following: Florence Molyneux, Mrs. Mileham, Madame P. Radaelli, Mrs. Barkley, Duchess of Sutherland, and Australie. Mr. Lunt 2nd, Mr. Nicol 3rd. Thirteen competed for six blooms, one variety, three in each vase. Mr. W. Simpson, gr. to Captain R. G. G. Wemyss, Wemyss Castle, Fife, was an easy 1st with extremely fine examples of Bessie Godfrey. Mr. D. Kidd, gr. to Lord Elphinstone, Carberry Towers, 2nd, with high quality blooms of Mrs. Mileham. Mr. Kenyon 3rd. In the class for 12 distinct varieties Japanese, three blooms in each vase, no fewer than fifteen took part. Mr. Nicholson secured the first place with representative examples of popular varieties. Mr. D. Nicol 2nd, with Mr. J. Cumming 3rd. For the prizes offered by Mr. Godfrey for his novelties there was not much competition, Mr. Lunt winning with fair blooms of Bessie Godfrey, Loveliness, Queen Alexandra, Grandeur, and Sensation as the best. Mr. R. W. E. Murray, Blackford House, a close 2nd.

Two classes were provided for incurved varieties in vases. For six blooms, any one variety, five competed. Mr. J. Boucher, gr. to H. E. Gordon, Esq., Aitkenhead, Cathcart, won with J. Agate, very neat. Mr. J. Wood, gr. to The Hon. Mrs. Hamilton, Dunmore Park, Larbert, 2nd, with C. H. Curtis. Mr. J. Martin 3rd with the same variety. For two varieties, three blooms of each, Mr. Martin won with ordinary flowers of well-known sorts.

Single flowered varieties receive much encouragement. For three varieties, with any kind of foliage, and any number of sprays, Mr. A. Knight, gr. to Sir W. Lawson, M.P., Brayton, Carlisle, had the best of five exhibits, staging Mary Anderson, Miss A. Holden, and Purity very attractively. Mr. D. Kidd, with Edith Pagram, Purity, and Perfection, 2nd. Mr. J. Hay, gr. to Mrs. W. Foster, Houghton Hall, Carlisle, 3rd. In the class for three vases decorative varieties, distinct, with not more than eighteen sprays in each, there was brisk competition and a fine display. Mr. Macgregor, gr. to R. H. Elliott, Esq., Clifton Park, was 1st among nine competitors with handsome groups of La Triomphante and its yellow sport, and an attractive red variety which we failed to get the name of. Mr. J. Holmes, gr. to Mrs. H. Ogilvy, Winton Castle, 2nd, with Mr. T. Baird, gr. to J. Younger, Esq., Arnbrae, Cambus, 3rd. Bouquets and baskets of flowers were a capital display, and so were the amateurs' division well represented.

The premier Japanese bloom of the show was a magnificent one of Miss Elsie Fulton, from Mr. T. Lunt, this bloom measuring 9in wide, 8in deep.

The society's silver medal was awarded to Mr. R. W. E. Mundy for Japanese Chrysanthemum "Lady Cranston" as being the best new variety not in commerce. This is indeed a gem, a sport from Mrs. Barkley. It has long drooping florets, some 1in wide, well built up in the centre. In colour it is pleasing; the centre is faint rose, gradually shading to almost white at the tips. The bronze medal was awarded to Dora Stevens, rose terra-cotta, a well built Japanese, belonging to Messrs. Wells and Co., Earlswood.

Plants were a distinct improvement upon last year. For six specimens distinct Mr. Ruleman, gr. to D. R. W. Huie, Esq., Hollywood, Colinton Road, was 1st with freely flowered examples of Souvenir d'une Petite Amie, Vivian Morel, and J. Shrimpton. Mr. W. G. Michie, gr. to Sir J. Steel, Bart., Boroughfield, 2nd. Mr. Ruleman was also 1st for four plants, not disbudded. Mr. W. Michie won for 4 Japanese with capital specimens of J. Shrimpton, Vivian Morel, and Souvenir d'une Petite Amie. Mr. Ruleman 2nd. Excellent were the plants confined to 6in pots. For 6 Japanese Mr. J. Fraser was first with such varieties as Soleil d'Octobre carrying one and half a dozen blooms. In a similar class for Pompons Mr. Ruleman won. Groups of Chrysanthemum called for little comment.

To encourage what is known as trade floral exhibits the association offered £20, £15, and £10 for the most meritorious exhibit of bouquets, baskets, &c. There was but one exhibitor, an extensive and beautiful display of floral designs by Messrs. Todd and Co., Shandwick Place, Edinburgh. In the centre of the group was a grandfather's clock, 7½ft high, executed in bronze Chrysanthemums, resembling mahogany, and panelled with Violets, richly ornamented with Alexandra Orchids and Safrano Roses. The dial was in white Chrysanthemums, and lettered with petals of white Chrysanthemums on green Rose leaves. The clock kept good time during the show, and was greatly admired. A mariner's wheel 4ft in diameter, was also a prominent figure in the exhibit, executed in yellow and bronze and ornamented with Cattleyas and Safrano Roses. An upright cross, 5ft high, in white, and sprayed with Cattleyas, and a broken column, in white, beautifully decorated with Liberty red and Bridesmaid pink Roses, were also very noticeable. Many other designs and a number of exquisite bouquets made up one of the most charming exhibits probably ever seen at any flower show. Messrs. Todd and Co. were awarded a prize of £20 for this artistic triumph.

Non-competitive exhibits were numerous, and added much to the attraction of the show. Gold medals were awarded to Messrs. Sutton and Sons, Reading, for a capital display of Potatoes, Carrots, &c. Amongst the sixty-five dishes of the former were excellent examples of Discovery (the noted new variety), Ideal, May Queen, Reliance, Sutton's Seedling, Ninetyfold, and Ringleader. The stand was tastefully decorated with Cyclamens, Ferns, &c. A like award was made in favour of Mr. G. Bunyard, Maidstone, for a charming collection of Apples. Silver medals were awarded to Mr. W. J. Godfrey, Exmouth Nurseries, for a collection of Chrysanthemums, including many of this season's novelties. The following received a first class certificate: Indian Chief, a rich red decorative variety, and Scarlet Prince, also a decorative of much value. To Messrs. W. Wells and Co., Earlswood Nurseries, Reigate, for an attractive exhibit of new Chrysanthemums and the best of older sorts.

First class certificates were awarded to Chrysanthemums Mrs. Bernard Hankey and Dora Stevens, the first named a pleasing incurved variety, and the latter terra-cotta red, a full-sized bloom. Messrs. R. B. Laird and Son, Pinkhill Nurseries, had a like award for an artistic group of stove and greenhouse plants.—EXPERT.

Leamington, Warwick, and District.

This annual fixture was held in the Winter Hall, Warwick, on the 19th and 20th, and although the exhibits were not so numerous as usual, they were in several instances of exceptional merit. The groups of miscellaneous plants (Chrysanthemums excluded) were undoubtedly the great feature of the show, and were described by a prominent judge as the best he had seen this year out of London, although he had recently visited fifteen shows. The five guineas offered by C. A. Smith-Ryland, Esq., for the best 24 Japanese blooms, in distinct varieties, was well won by Mr. Blakeway, gr. to Sir Albert Muntz, M.P., Rugby, with a remarkable stand of deep, fresh, well-coloured flowers. The Leamington Nurserymen and Florists' Company (manager, Mr. Harper), were 2nd; and Mr. Liney, gr. to W. Low, Esq., Wellesbourne, Warwick, 3rd. A silver cup, value three guineas, given by the Mayor of Leamington, was won by Mr. R. Jones, gr. to C. A. Smith-Ryland, Esq. Twelve Japanese and 12 incurved, distinct, were required, and Mr. Jones's best blooms were Japs. The same exhibitor was also 1st for 12 incurved and for a like number of Japanese. Mr. Blakeway won for 6 Japs. The special prize (a cruet stand) was won by Mr. A. J. Friend, gr. to the Misses Robinson. Baskets of flowers, bouquets, wreaths, and crosses were shown in very fine condition, the principal prizewinners being Messrs. Kimberley (Kenilworth) and the Leamington Nursery Company.

The best group of Chrysanthemums was staged by the Leamington Nursery Company, Mr. W. Vause being 2nd. The same two exhibitors secured the prizes offered for a miscellaneous group, and their positions were unchanged.

Mr. Crump staged a fine collection of fruit, not for competition; the Ranelagh Company had their new Asparagus myriocladus; Messrs. Finch and Co. a grand wreath. The above non-competitive exhibits received suitable recognition. Both the Ranelagh Company and the Leamington Nursery Company won 1st prizes for dinner-table decorations.

Manchester, Nov. 19th, 20th, and 21st.

Amongst those showing honorary exhibits here were Messrs. W. Clibran and Sons, Altrincham (Chrysanthemums, Celosias, and Cyclamens), gold medal. Messrs. J. Waterer and Sons, Ltd., Bagshot, with Conifers, gold medal. Messrs. Dickson, Brown, and Tait, Manchester, received a similar award for a

superb collection of Gourds and Pumpkins. Mr. G. Boyes, Leicester, had a silver medal for a splendid table of Carnations. A similar award went to Mr. J. Robson, Altrincham, for grand Carnations. Messrs. Wells, Ltd., had a bank of single incurved and Japanese Chrysanthemums. Mr. Edwards had also a nice assortment of table decorations. The prizewinners in the competitive classes were Messrs. C. J. Salter, Reigate; Chandler, Coton House, Rugby; Nisbet, Byrkley; Hall, Melehet Court; S. Vickers, Kenwood, Bowdon; T. Derbyshire, Wilmslow; and others.

Bolton (Lancashire), Nov. 20th and 21st.

The seventeenth annual exhibition, held in the Albert Hall, had a magnificent opening on the above dates, by the Mayor and Deputy Mayor of Bolton. The exhibits were more numerous and the competition keener than at any previous exhibition. The judges were Messrs. P. Blair, Trenham, J. P. Leadbetter, Hull, J. Hathaway, Southport, and H. Ranger, Liverpool. Mr. B. Ashton (gr. to the Earl of Lathom) staged 18 dishes of Potatoes (not for competition), which were very fine, and attracted great attention. The chief prizewinners were as follows, viz.:—The Open Cup class for 24 cut blooms was keenly fought, there being seven entries. 1. E. Ellis, Esq., Heswall (gr., J. Davies); 2. Dowager Lady Ashburton, Romsey (gr., G. Hall); 3. John Stanning, J.P., Leyland (gr., J. Kirkman).

For 24 Japs Mr. Ellis again came 1st; 2. Ed. Evans, Esq., Bromboro' (gr., C. Jones); 3. Captain Fielden, Blackburn (gr., H. Boyd). The groups were exceptionally good. For a miscellaneous group (12ft square), Ed. T. Crook, Esq., led; 2nd, J. W. Makant, Esq. For the Chrysanthemum group J. Harwood, Esq., won the silver challenge cup outright (gr., W. Burgess), Mrs. Tillotson came 2nd (gr., J. Horrocks); and for the mirror groups the order was J. Musgrave, Esq. (gr., J. Abbott), T. Walker, Esq. (gr., J. Barclay), Mrs. Ainsworth (gr., J. Trevena), and the Mayor of Bolton (gr., G. Pawson), as named. The President's Cup for 24 cut blooms was again carried off by Ed. T. Crook, Esq., J. W. Makant, Esq., coming 2nd.

The fruit classes were specially good. For 2 bunches Black Alicante 1st and gold medal was won by I. C. Waterhouse, Esq., Prestbury (gr., A. Hall). For 2 bunches black (any other variety), Colonel R. I. Blackburn, Hale, led, and J. Musgrave followed. For 2 bunches white Grapes Colonel R. I. Blackburn again was 1st. For 6 large-flowering Chrysanthemum plants 1st and silver challenge cup went to J. Musgrave, Esq. Vegetables: E. Knowles, Esq., (gr., G. Corbett) won R.H.S. bronze medal and 1st; P. S. Mayhew, Esq., Chorley (gr., H. Parkinson, 2nd; and R. W. Harley, Brampton Bryan, 3rd. The Primulas were specially commented on by the judges, there being some real good competition. For 6 dinner table plants there were 10 entries, Mrs. Tillotson leading, and Mr. Thos. Walker being second. For 3 plants of Gloire de Lorraine there was a fine show, and Ed. T. Crook, Esq., won. The vases were well represented, especially the singles. The gardener's local classes were also well competed for. The amateurs drew great credit on themselves, showing what can be done within a radius of eight miles of a smoky town like Bolton. This year a handsome silver challenge cup had been presented to the society for a group of Chrysanthemum plants. This, along with a gold medal, was won by Mr. W. Laidlaw, Chorley Old Road; 2. Mr. H. Windle, Deane; 3. Mr. W. Eckersley, Middle-Hulton. In the other classes the competition was also very keen. Considering the inclement weather the attendance was very good, and on the Saturday morning the doors were thrown open to admit free the children of the whole of the institutions of the town and district; also the poor children of Bolton who could not afford to pay.

Chester Paxton—Annual Show.

The annual exhibition of the Chester Paxton Society was held in the Assembly Room of the Town Hall on Wednesday and Thursday. The exhibits showed a decided improvement on previous years, and in the opinion of the adjudicators the quality of the Chrysanthemums was of a very high order. The groups of Chrysanthemums formed a special feature. Mr. T. Gibbons Frost, Mollington Banastre (gardener, Mr. Gilbert), won for a large group. The credit of the position was enhanced by the fact that the exhibitor had beaten Major Macgillicuddy (per Mr. Stubbs), who for the first time had to take second place. Third, Mr. Edward Dixon, Littleton Hall (per Mr. John Dutton). The first prize of six plants of single Chrysanthemums was easily carried off by Major Macgillicuddy (per Mr. Stubbs); Dr. Lawrence second. For six plants of the Japanese incurved varieties there were only three entries, Major Macgillicuddy again taking an easy first, Mr. Gibbons Frost being second. The exhibits of Chrysanthemum cut blooms were numerically in excess of previous years. The principal prize was for eighteen Japs, and was carried off by Mr. Charles Threlfall, of Tilstone Lodge (per Mr. T. Herbert), the first prize for six vases of single varieties being captured by Major Macgillicuddy. A new feature of this year's exhibition was a class for three ladies' sprays of sweet scented Violets. The first award went to Sir

George Mayrick, Bart., of Bodorgan (per Mr. W. Pilgrim). Mrs. J. C. Okell was second, and Miss Humberston (per Mr. Wakefield) third, the three exhibits being very beautifully arranged. Bottled fruits, which are always an important feature at this exhibition, were fairly well represented by excellent examples. The chief prize for the twelve bottles was carried off by Mr. Owen Roberts (gardener at Willington Hall), who was very closely followed by Mr. John Weaver. A most notable and perhaps the most praiseworthy of the honorary exhibits was a collection sent by his Grace the Duke of Westminster (per Mr. N. F. Barnes), to whom the judges unanimously awarded a gold medal. Owing to the increased number of entries Messrs. Dicksons, Ltd., had to be content with a smaller space than usual, but the display was a very effective one, and was in every way worthy of the great firm. Messrs. McHattie and Co. also sent an interesting exhibit of flowering and foliage plants, locally grown Apples, &c., and the well-known firm of Messrs. Clibrans, of Altrincham, had a beautiful display of Celcias and Chrysanthemums.

Cardiff Gardeners' Association.

The third meeting of session took place at the Grand Hotel on Tuesday, November 10, Mr. W. J. Prosser presiding. Mr. H. R. Farmer, gardener, Cardiff Castle, gave a lecture on "Vines." As far as time would allow for a subject of this kind, he gave as many details as was possible, and much useful information, especially to beginners, deeply impressing upon them to be careful in the management from the period of striking the eyes to the cutting of the fruit. Several of the leading varieties were mentioned, and hints given as best for their individual management. At the close the best thanks of the Association were accorded the lecturer, who was fortunate enough last July to have received from the deputation of the R.H.S. to Cardiff a Knightian Medal for his pot Vines, which, at the time, were carrying well-finished bunches of Grapes. A vote of thanks was also accorded to Mr. Davy for staging *Catasetum viride flavum*.

Newport (Mon.) Gardeners' Improvement.

The usual meeting of the above society was held on November 11, when Mr. J. Pegler, hon. sec. of the association, read a paper on "The Wonders and Curiosities of the Vegetable Kingdom" to a large attendance of the members, presided over by Mr. J. Duff. Mr. Pegler, in his paper, gave a description of a Brazilian forest, also a Mangrove forest; he gave the height of the Wellingtonia, and circumference of the trunks of these trees, and proceeded to describe the Banyan, Baobab, Bread Fruit, and Traveller's Tree. The Victoria Lily was given as having the largest leaf, and Rafflesia Arnoldi as the largest flower. The Lace plant, the Dove plant, Clock plant, Venus' Fly-trap, and the Sundew were also dealt with. The paper was listened to with great attention, and a discussion followed, in which the chairman, Messrs. Powell, Harris, Woodward, Jones, Basham, Jarvis, Bishop, Daniels, and others took part. A hearty vote of thanks was accorded Mr. Pegler for his paper.

Shirley (Southampton) Gardeners'.

The monthly meeting of this association was held in the Parish Room, Shirley, on Monday, November 16, and there was a very large attendance. Mr. H. J. Jones, Ryecroft Nursery, Lewisham, lectured on the cultivation and exhibition of the Chrysanthemum. The address was a most interesting one, and was listened to with great attention. The lecturer promised to have the details typed, and forwarded to the secretary for distribution amongst the members. As he had to leave to catch a train, he could not stop for the usual discussion which takes place after such lectures. Before leaving he was very cordially thanked for his interesting address. The chairman then distributed the certificates awarded at the last meeting for exhibits. Mr. Valentine won the society's certificate for the best Chrysanthemum bloom. Mr. Bushell gained a like honour for a specimen Orchid. The next lecture will be given by J. Brierley, Esq., F.C.S., Member of the Society of Public Analysts, on "Beginnings of Life."—J. M.

Young Gardeners' Domain.

The Editor welcomes short letters from under-gardeners. Letters should be confined to 500 words in length, should be written only on one side of the paper, as clearly as possible, with one inch space at both top and bottom, as well as at the sides.

Principles of Propriety.

When starting for the first time in a situation, journeymen and apprentices work with honest determination to get on; but gradually this wears off. They lose interest in their work. I can safely say that nine-tenths of the young men in England spend too much time and money in public-houses and on

pleasure-seeking. There is no serious thought or study in order to become proficient in gardening. They forget that they are dealing with the vegetable creation, which abounds with mysteries yet to be unfolded. How ought gardeners to conduct themselves? Let them keep out of public-houses as much as possible. I am not an advocate of teetotalism. Let the motto be: "Use, but do not abuse." Let all of us also be very careful with our language: there is nothing more detestable on a gentleman's establishment than coarse, slovenly speech. The next thing to be detested is smoking during working hours. If one must needs smoke between meals, let him get out of sight in the shrubs for a few minutes, and have his "fifteen draws." Personally, I prefer a snap of bread and cheese about eleven o'clock, to a smoke, and I enjoy a good smoke after dinner. Above all, be punctual every morning, and bear in mind that the longer you remain on the place during the day, the more you learn. If you make a practice of coming late every morning (five minutes, and half an hour sometimes) and you are not called to account for it, and think yourself clever and a favourite with the "boss," you will find your great mistake one day. The wise head of the "boss" shakes gently, and he says to himself, "He'll make a poor gardener." If you stay any time in that garden, then you will find yourself assigned the work of a labourer, unless you fire up a bit better.

Now a word may be said with regard to study. All of us know we cannot well study without the proper books, and that means money. Young men and apprentices have not much money to afford to buy the best books, not even any, sometimes. Without doubt most head gardeners have a few books on the elementary principles of botany, and I should advise young men to approach the head with due respect, and inform him of the desire to learn, and ask him to lend some books to begin with. If there is anything in him at all, he will give you them, and do all in his power to help you; that is, if you deserve it. Again, if you happen to be in town any day or night, keep your eyes open. One day I strolled down Leith Walk, Edinburgh, and espied a second-hand book shop. I entered, and rummaged for two hours or so, and tumbled on "Keith's Botanical Lexicon," which I obtained for 7d.—a good book, and certainly not out of date. Anyone who is anxious about his becoming proficient in the profession can easily find ways and means to obtain material for study. If he cannot buy, there are free libraries and weekly garden papers.

The object in my contribution is to bring before young men some hints on the way to conduct themselves, and gain respect for the most ancient of callings, and also to endeavour to excel in such things as appertain to gardening. The struggle to gain the top may be hard, but those who have the hardest struggle have the most experience practically. In closing, allow me to say that I am now in my fourth general foreman's place, and I hope my experience is a warrant for attempting what I have written. I hope in the course of a few weeks to write an article on "Foremen, their Conduct and Examples to Those Under Them." Trusting I am not trespassing on space in your excellent paper.—SCOT. [The letter will be acceptable.—ED.]

[Other letters are unavoidably held over.—ED.]

Entomology.

Tortrix Wæberiana, or *Waberian Moth*,

Among insects that are harmful to the Peach and Apricot trees, is this species, a figure of which is here given. Its presence in the larva state is indicated by small heaps of dust upon the bark. When this is



TORTRIX WÆBERIANA, OR WABERIAN MOTH.

removed a furrow is perceptible, in which the larva feeds and occasions a flow of sap, the consequence being that the tree is much weakened where the insects are numerous. This small but pernicious caterpillar feeds throughout the year. It is dull green, and red-headed. The moth, which is brown, with silvery and golden marks, sits upon the bark in May and June, and while the wings are folded, the human eye can hardly distinguish it.

Pennisetum macrophyllum atrosanguineum, the new Grass, for which H. A. Dreer received honourable mention at the late exhibition in Boston, is of a dark bronzy red, a rare colour in Grasses.

SAD END OF A NURSERY EMPLOYEE.—A workman at Messrs. Barr and Sons' nurseries, Long Ditton, on Tuesday last, found the body of Clemmes Sonntag, a foreman, lying in a water-lily tank, with a fearful wound in the throat. A table-knife was found at the bottom of the tank.



Hardy Fruit Garden.

PREPARATION OF GROUND FOR PLANTING BUSH FRUITS.—Generous treatment in regard to deep digging of the ground, and a liberal application of manure, thoroughly incorporated with the soil, results in providing a suitable medium for healthy, vigorous, and fruitful growth. Ground, whatever its character, may be trenched, but whether this should be ordinary trenching or bastard trenching will depend chiefly on the treatment the ground has hitherto received. Trenching is best carried out on ground which has at some previous period, not just recently, been deeply dug or bastard trenched. The subsoil will, in this case, have become ameliorated and in a fit state for bringing to the surface. Mix with it decayed manure. The other form of trenching, namely, bastard trenching, should be adopted when no previous deep moving of the ground has been attempted. The soil is moved to the depth of two spits, but these must not be reversed in position, or the inert material, which is usually found in subsoil that has not been cultivated, will be brought to the surface, and the best buried. Mix good, decomposed manure with both spits, the lower spit, if consisting of very unkind material, being intermixed with any other soil or vegetable matter of an improving character.

BUSH GOOSEBERRIES.—Among the best varieties of Gooseberries to plant for general purposes are *Whinham's Industry*, *Keepsake*, *Crown Bob*, *Whitesmith*, *Red Champagne*, *Yellow Champagne*, *Warrington* and *Ironmonger*. To grow as bushes on good soil, plant at a distance of 6ft from each other. This will give them ample room to develop to a prolific size to give good crops. Fair sized, symmetrical young bushes should be planted, possessing good, fibrous roots, which spread out to their full extent, and cover carefully with some fine soil. Cover the roots with a little mulching consisting of some light, half-decayed, strawy material.

BUSH RED AND WHITE CURRANTS.—A plantation may be wholly formed of these, or they may alternate with Gooseberries, the same distance apart in planting being followed. *Red Dutch*, *White Dutch*, *Raby Castle*, and *Fay's Prolific* are the best varieties. The two latter are red varieties. For forming bushes, young plants must be procured with several stout stems, which may be cut back and others formed, that is, two from each may be originated to constitute the foundation of the bushes. Seven main stems will be sufficient to form a good bush. Spurs for the fruit bearing must be built up by summer pruning the side shoots, and shortening the leaders in winter, also spurring in the side shoots at the latter time.

BLACK CURRANTS.—These are wholly grown in bush form, the best varieties being *Black Champion* and *Lee's Prolific*. The open bush form of growth is favoured, and is altogether the most prolific. Restricted and stunted training is by no means prolific for these fruits, hence the bushes should be planted with a view to maintaining a good supply of wood, which must not be crowded. In a word, retain all the best of the current year's wood, give it plenty of room, and cut out the old. The distance apart for planting should be six feet every way. Black Currants do well in moist soil and positions.

CORDON GOOSEBERRIES AND CURRANTS.—Grown against walls and trellises, the trees do not occupy much space, and are very prolific if carefully managed. Trees trained for walls may be obtained from the chief hardy fruit nurserymen, the branches being originated about six inches apart from an horizontal base. There is, however, no difficulty in obtaining them as single stem plants, the cultivator training them himself; but time is saved by commencing with plants having stems already originated, but not, of course, fully developed. To form single or double cordons for walls or fences, cut back a single stemmed plant to twelve inches. For a single cordon train one shoot upright; for a double cordon train two, these being trained six to nine inches apart. Pinch the side shoots in summer, and shorten the leaders in winter to nine inches. This must be repeated annually until the branches have attained the height required. Cordon culture is excellent for procuring late crops, utilising north and east walls for this purpose.

RASPBERRIES.—Ground prepared as for Gooseberries and Currants will suit Raspberries. Good varieties consist of *Superlative*, *Baumforth's Seedling*, *Carter's Prolific*, *Prince of Wales*, and *Norwich Wonder*. Raspberries may be planted in lines or clumps. With the former method, the canes will require training to wires, which must be stretched between stout stakes or posts fixed at each end. Three lengths of wire will suffice, the upper length being not more than 5ft high. Plant the canes

two feet apart. With the clump system three canes may be planted a foot apart in a triangle, eventually driving down a stout stake not more than 5ft high in the centre. The best planting canes are those of slender growth, but possessing ample fibrous roots. All must eventually be cut down close to the ground the first season, so as to encourage the formation of strong fruiting canes.—EAST KENT.

Fruit Forcing.

CUCUMBERS.—Winter-fruiting Cucumbers are frequent failures. This is mostly due to a deficiency of heating surface combined with an arid atmosphere. Sharp weather necessitates brisk firing, which, when there is little piping, dries the atmosphere, causing excessive evaporation from the foliage, and it becomes crippled in consequence; the fruits are also stunted, and swell indifferently, and where the pipes are in close proximity to the roots the soil is dried too much, and the growth consequently is not healthy. Heat radiated at a high temperature is not good for vegetation, and when the water in the pipes has to be kept at near boiling point failure is almost inevitable; besides, it is highly wasteful of fuel. Admit air very carefully, yet afford a little when opportunity offers, excluding it, however, when the external air is cold and sharp, turning off the top heat when the sun is very bright and likely to raise the temperature much over 85deg or 90deg. In bright weather damp the house morning and afternoon, closing early; but be careful not to wet the embryo fruit, for water hanging from it will cause decay. Water will be needed at the roots about twice a week, always affording it equal in temperature to that of the bed. Maintain a night temperature of 60deg to 65deg, and 70deg to 75deg by day, and advancing 5deg, 10deg, or 15deg from sun heat, and endeavour to enclose as much sun heat as is safe.

The plants from the early August sowing and planted out in September have covered the trellis and are fruiting, but this must be allowed very moderately if the plants are expected to afford full supplies at a later period, and unless there is undue vigour in the plants they should not be allowed to bear for a few weeks, especially if they are wanted to afford fruit at the new year and forward. Attend frequently to stopping and thinning, also tying the shoots, avoiding overcrowding, as stout foliage better endures the trying ordeal of wintry weather. Canker is best held in check by lessened moisture, and not any at the collar, rubbing quicklime well into the affected parts. Removing useless old leaves is good for the plants, and may keep off attacks of red spider, but if that pest appears, sponge the infested leaves carefully with a solution of paraffin and softsoap, 2oz to a gallon of tepid water. If this be done on the first appearance of the pest much after trouble will be saved. Mildew must be kept under by dusting the infested parts with flowers of sulphur, or brushing the pipes with sulphur brought to the consistency of cream with skim milk. This will also destroy white fly. Aphides succumb to vaporisations with nicotine, as also does mealy bug. Tobacco fumigation in two or three consecutive evenings is also effectual against aphides and thrips.

CHERRY HOUSE.—The trees must now be pruned. Full-grown trees, properly attended to in stopping during growth, will require very little pruning now. Any summer shoots that have grown considerably should be cut back to about an inch of their base, and the worn-out spurs may be shortened or removed as required. Cut out dead spurs and thin those that are crowded, always reserving sufficient for producing a crop. The terminal shoots in the case of trees extending must not be shortened, but when they reach the extremity of the trellis they will need shortening, always to a wood bud. Young trees will require to be cut back as much as may be necessary, the central shoots being shortened so as to originate others for filling the space regularly; but it is not desirable to start them too closely together, as they may cause the branches to press against each other, and this commonly results in gumming. Fan training is unquestionably the best for the Cherry, as it admits of replacing any branch falling a prey to this disease, and of renewing worn-out limbs.

Thoroughly cleanse the house—the woodwork with soapy water, using carbolic or paraffin soap, and well brushing off the dirt, afterwards cleansing with clean water, and washing glass clean outside as well as inside with clean water. Limewash the walls, using freshly-burned lime with a handful of flowers of sulphur to each pailful of whitewash. Syringe the trees with hot water, 140deg to 150deg, to subdue any hibernating pests, and if infested with red spider dress with a solution of caustic soda and pearlash in equal parts, using 1½oz of the mixture to a gallon of water, and applying by means of a clean, half-worn painter's sash brush, so as to wet every part evenly, especially the cracks and crevices of the bark, taking care not to injure the buds. Remove the loose surface soil and supply fresh loam, with a pan of well-rotted manure intermixed, sprinkling on the surface a good handful per square yard of some approved fertiliser, scratching in very lightly with a fork.

The roof lights being off, they need not be replaced until the time arrives for starting the trees, which should be about the middle of December to have Cherries ripe early in May. The very early varieties will ripen sooner, such as Belle d'Orleans and Rivers' Early, these being followed by Governor Wood and Black Tartarian. Cherries must not be brought forward too rapidly, especially when forcing them for the first time. Trees under fixed roofs should be well supplied with water to keep the soil moist; but fixed roofs are great mistakes in the early forcing of Cherries, unless they are grown in pots, when they will be placed outdoors after the fruit has been gathered and wood sufficiently developed. Trees in pots are readily forced, and afford excellent fruit at the end of April or early in May, when fresh ripe fruit is not over plentiful. Cherries are then always appreciated at table.—ST. ALBANS.



** All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.

VINES FOR PLANTING AND FRUITING (G. C. S.).—

1. The Vines, two years old from the eyes for planting, should be shortened to the length required, say the bottom wire of the trellis. This is better than leaving full length and disbudding after planting and growth taking place, as the forces of the Vine will be concentrated on the uppermost buds, and the growths not required, or below the pruned buds, can be removed whilst they are relatively small, thus confining the vigour to the shorter shoots retained. 2. The Vines in pots and to be fruited therein may be shifted into others a size larger, but it is not advisable to give them a large shift, a couple or at most 3in larger size, potting firmly, and providing good drainage. With feeding they may be fruited well in the 12in pots, and they would certainly derive considerable benefit by knocking out the bottom or enlarging the apertures of the pot, and partially plunging in the border, always providing free access for the passage of water passing through the pots. 3. There will not be room for fruiting the Vines in pots between the permanent, these being only planted 3ft apart. This distance is much too small for permanent Vines; they should be at least 4½ft apart, then between them you may fruit the supernumeraries.

PROPAGATING POTATOES FROM CUTTINGS OR SHOOTS (An Old Contributor).—

There are several methods. 1. Raising from single eyes. In this case the tuber is cut into as many portions as eyes, and each is potted into a small pot and placed in a house with a gentle heat, say 55deg to 65deg, with 10deg to 15deg or more rise from sun heat. Each eye soon pushes a growth, which, when it has grown a few inches high, is topped, and the top inserted just as one would insert a Pelargonium cutting, and in a gentle heat and shade from bright sun the cutting soon roots. Other shoots shortly appear from the cut down plant, and when these are long enough they can be taken off and inserted as cuttings, suffice that each cutting has two joints and the growing point. The plants first struck as cuttings can be topped and each top inserted, so that, by commencing about the middle of February, a great number of cutting plants can be had from a single tuber, as well as the single eye plants. 2. A tuber is placed to sprout in a house or place where there is heat and moisture, and when each sprout is about 3in long it is detached and treated as a cutting, and the same eye of the tuber which gave the first cutting or sprout usually develops several such cuttings from side eyes, and these can be taken off as advanced and potted. 3. Placing the tuber or tubers in a box containing soil, say some under and over, just covering, putting in a warm house, and as the shoots appear above ground taking off the cuttings and rooting them. In this way about a hundred plants have been raised from a single tuber. It is scarcely necessary to point out that if such compound multiplication is contemplated, it is important to commence not later than March, because the rooted cuttings should be nice little plants in pots, duly hardened off, so as to be planted out in May. Even when the division is not carried beyond the single eye system it is advisable to establish them in pots, as they succeed much better

than when the single eyes are put directly into the ground. This can readily be effected in a cold frame, protection being given on frosty nights. The cuttings, on the other hand, must have heat for striking, as well as the tubers or plants for growing, and the young stock must be properly hardened off before planting out.

HYDRANGEA LEAVES FOR OPINION (D. C.).—There is nothing the matter with the leaves; at least, we could not discover anything. They are simply become sere or mature, and is quite natural.

OFFICIAL CATALOGUE OF THE N.C.S. OF FRANCE (Constant Reader).—Could you tell me where I could get the Official Catalogue of the French National Chrysanthemum Society (diseases and pests)?

[We are sorry to have delayed an answer to your question. It is published in the form of a chart, and can be had from Mons. Philippe Rivoire, Secretary French National Chrysanthemum Society, Lyons, France.]

R.H.S. EXAMINATION (Certificate).—You will obtain information as to what books the Council of the R.H.S. recommend by applying to the secretary of the Society, 117, Victoria Street, Westminster, S.W. You should watch the front page of the *Journal of Horticulture* for announcements by tutors who prepare men like yourself by correspondence tuition. We advise you to pay 1s. for a set of the questions that have been given at past examinations, and to study these. You will thus become acquainted with what is likely to be required of you, and can set yourself questions to answer. If you cannot answer those put by the R.H.S., look up books and papers bearing on the several subjects. You will never regret having tried, and we hope you will sit for examination next year, if for no more than the experience of it. We think that the writing practice offered by us under the Young Gardeners' Domain would be of great assistance in preparing you for the clear and ready expression of your knowledge of practical horticulture. Are there no elementary botany classes in your town? We have known young men walk five and six miles to attend classes.

NAMES OF FRUITS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (T. and P.).—Pear Magnate. (T. S. P.).—1, Rambour Franc; 2, Reinette Grise. (M. Abbs).—Not known, probably a local variety; it is somewhat like Betty Geeson.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (Sussex).—Your flower is a cultivated form of *Lathyrus setifolius*, L. (J. P.).—1, *Oncidium Forbesi*; 2, *Cypripedium venustum*. (F. L.).—*Aucuba japonica* vera. (N. F.).—See note under Answers to Correspondents. (F. L., Dover).—1, *Cupressus Nootkensis*; 2, *C. macrocarpa lutea*; 3, *C. Lawsoniana pendula*; 4, *Cedrus atlantica glauca*. (L. B. W.).—1, *Abies Pinsapo*.

Weather Notes.

At Hamilton.

The elements still give much anxiety to tillers of the soil. Here and there throughout the country some belated corn stooks are standing. Wheat sowing in many cases has been practically impossible, and at present the weather is very stormy and boisterous.—D. C., November 23.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
November.										
Sunday ...15	S.W.	deg.	deg.	deg.	deg.	Ins.	deg.	deg.	deg.	deg.
Monday ...16	W.S.W.	38.9	37.9	48.3	34.5	—	48.8	51.0	52.3	26.5
Tuesday ...17	W.	36.3	35.8	44.5	31.0	—	46.4	50.3	52.2	22.6
Wednesday 18	W.N.W.	39.4	36.9	41.8	37.0	0.06	45.4	49.5	52.2	28.0
Thursday 19	N.N.E.	39.7	38.0	43.6	36.3	—	44.8	49.0	52.0	29.5
Friday ...20	S.W.	38.2	32.3	40.9	34.1	—	44.1	48.4	51.7	25.3
Saturday 21	S.W.	36.4	34.3	52.2	28.0	—	42.7	47.9	51.5	14.5
		51.5	47.7	54.8	35.9	—	44.4	47.3	51.2	35.5
MEANS ...		40.1	37.6	46.6	33.8	Total.	45.2	49.1	51.9	26.0

The weather has for the most part been dull, with intervals of bright sunshine, and a week almost without rain.

Trade Catalogue Received.

H. J. Jones, Ryecroft Nursery, Hither Green, Lewisham.—*Chrysanthemums, including List of Michaelmas Daisies.*

B. S. Williams and Son, Upper Holloway, N.—*Trees and Shrubs, &c.*

Covent Garden Market.—November 25th

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, Globe, doz.	2 0	to 2 6	Mushrooms, house, lb.	0 10	to 0 6
„ Jerusalem, sieve	1 6	2 0	Onions, per case ...	5 0	5 0
Asparagus, Sprue, bundle	1 0	1 1	„ per bag ...	4 0	5 0
„ Paris Green...	4 0	5 6	„ picklers, sieve	2 6	4 0
Beans, dwarf, per lb...	0 8	0 10	„ English, cwt.	5 0	5 6
„ Madeira, basket...	1 6	2 0	Parsley, doz. bnchs.	1 0	1 6
Beetroots, per bushel...	1 6	2 0	„ sieve...	0 6	1 0
Brussels Sprouts, sieve	1 3	1 9	Parsnips, per bag ...	2 0	2 6
Cabbages, tally ...	2 0	3 6	Potatoes, per ton...	75 0	130 0
Carrots, doz. bun. ...	1 3	2 0	Radishes, doz. bun. ...	0 9	0 0
„ per bag ...	2 6	3 6	Salad, small, pun., doz.	0 9	1 0
Cauliflowers, doz. ...	1 0	2 0	Seakale, per doz....	15 0	21 0
Celery, per doz. bun. ...	8 0	12 0	Shallots, per lb. ...	0 1½	0 2
Cress, per doz. pun. ...	0 9	1 0	Spinach, per bush. ...	3 0	0 0
Cucumbers doz. ...	2 6	4 6	Tomatoes, Channel Is-		
Endive, per doz. ...	1 0	0 0	lands, per lb....	0 3	0 0
Garlic, per lb. ...	0 2	0 3	„ Canary Deepes ...	3 0	5 6
Horseradish, foreign,			„ English, per 12 lb.	3 0	5 6
per bun. ...	1 3	1 6	Turnips, doz. bun. ...	1 0	1 6
Leeks, per doz. bun. ...	1 0	1 6	„ per bag ...	2 0	2 6
Lettuces, Cabbage, doz.	1 0	0 0	Watercress, doz. bun.	0 4	0 6

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, home-grown,			Grapes, Gros Maroc, lb.	1 0	to 0 0
cookers, per bushel	3 0	to 10 0	„ Muscats, A., lb.	3 0	4 0
„ per half bushel ...	2 0	5 0	„ „ B., lb.	0 9	1 6
„ per barrel ...	12 0	18 0	„ „ Canon		
„ American, in cases	8 0	10 0	„ Hall, A., lb. ...	3 0	5 0
Bananas, bunch ...	7 0	12 0	„ Muscats, B., lb.	1 6	2 6
„ loose, dozen...	1 0	1 6	Lemons, per case...	16 0	30 0
Blackberries, per peck	2 6	0 0	Lychees, box... ..	1 2	0 0
Chestnuts, bag ...	6 9	14 0	Melons, each... ..	1 0	3 0
Cobnuts, per lb. ...	0 7½	0 8	Oranges, per case...	4 6	13 0
Cranberries, per case...	15 0	0 0	Pears, per case ...	8 0	15 0
Figs, per box ...	0 10	1 0	„ stewing ...	6 0	0 0
Grapes, Alicante, lb. ...	0 7	1 3	Pines, each ...	1 6	4 0
„ in Barrel...	10 0	18 0	Walnuts, Grenoble, bag	5 6	0 0

Average Wholesale Prices.—Cut Flowers.

	s. d.	s. d.		s. d.	s. d.
Arbutus, bunch ...	0 6	to 0 0	Mignonette, per doz. ...	2 0	to 3
Bouvardias, per bun. ...	0 3	0 6	Mimosa (Acacia), per		
Callas, per dozen. ...	3 0	4 0	doz. bun. ...	6 0	9 0
Carnations, per bun. ...	0 6	3 0	Narcissus, doz. bun. ...	3 0	4 0
Chrysanthemums—			Orchids, Cattleya, doz.	6 0	12 0
doz. bunches ...	2 0	6 0	„ Odontoglossums,,	1 6	2 6
specimen blooms, doz.	0 9	2 0	„ Cypripedium in-		
Eucharis, per. doz. ...	3 0	4 0	signe, per doz.	1 0	2 0
Ferns—			Pelargoniums, zonal,		
Asparagus, per bunch	1 0	2 6	doz. bun....	3 0	4 0
French, doz. bunches	0 4	0 6	Poinsettias, bun....	0 10	1 0
Maidenhair, doz. bun.	4 0	6 0	Roman Hyacinths, bun.	0 6	1 0
Gardenias, box ...	1 0	1 6	Roses, Mermet, per doz.	2 0	4 0
Honesty (seed vessels),			„ Various, per bun.	0 6	1 6
per bunch ...	1 0	3 0	„ White „	1 6	2 0
Lilac (French), bun. ...	5 0	0 0	„ Pink „	1 0	2 0
Lilium longiflorum, bun.	2 0	4 0	Smilax, per doz. trails	1 0	1 6
„ lancifolium „	1 6	3 0	Stephanotis, per doz....	1 6	3 0
„ auratum „	1 0	2 0	Tuberoses, strong, bun.	0 9	1 0
Lily of the Valley, per			doz. ...	0 2	0 3
doz. bun. ...	6 0	12 0	Violets, per doz. bun....	1 0	1 6
Marguerites, yellow,			„ Parma, per bun.	1 0	2 0
per doz. bun. ...	1 0	2 0			

Average Wholesale Prices.—Ferns, Foliage, Moss.

	s. d.	s. d.		s. d.	s. d.
Asparagus, long, bnch.	2 0	to 2 6	Ivy leaves, doz. bun....	1 6	to 0 0
„ medium, bunch ...	1 3	1 6	Myrtle, large French,		
„ short, per doz. bun.	6 0	7 0	per doz. bun. ...	1 0	0 0
„ Sprengeri, dz. bun.	9 0	18 0	„ small English, per		
Smilax, long, doz. trails	3 0	0 0	doz. bun....	6 0	0 0
Maidenhair, best, per			Moss, natural green, per		
doz. bnchs. ...	0 0	6 0	gross bun. ...	6 0	0 0
Berberis, per doz. bun.	0 0	0 0	„ Lichen, full size		
Croton foliage, various,			boxes, per box ...	1 0	0 0
per doz. bun....	9 0	12 0			

Average Wholesale Prices.—Plants in Pots

Most of the undermentioned plants are sold in 48 and 32-sized pots

	s.	d.	s.	d.		s.	d.	s.	d.		
Adiantums, per doz. ...	4	0	to	8	0	Euonymus, vars., doz.	4	0	to	6	0
Aralias, per doz. ...	4	0		8	0	Ferns in var., per. doz.	4	0		30	0
Arbor Vitæ, per doz. ...	9	0		18	0	Ficus elastica, doz. ...	9	0		24	0
Aspidistras, per doz. ...	18	0		36	0	Lilium longiflorum, doz.	6	0		12	0
Aucubas, per doz. ...	4	0		8	0	„ lanceifolium „	6	0		12	0
Begonia, per doz. ...	8	0		18	0	Lycopodiums, per doz.	3	0		4	0
„ Gloire de Lor-						Marguerites „	6	0		12	0
„ raine, per doz.	8	0		24	0	Orange Trees, each ...	3	6		10	6
Chrysanthemum, doz.	3	0		30	0	Palms, var., each ...	3	0		20	0
Coleuses, per doz. ...	4	0	—	5	0	Poinsettias, per doz. ...	10	0		12	0
Crotons, per. doz. ...	12	0		24	0	Primulas, per doz. ...	4	0		0	0
Cyclamens, per doz. ...	10	0		12	0	Pteris tremula, per doz.	4	0		8	0
Cyperus, per doz.	3	0		4	0	„ Winsetti „	4	0		8	0
Dracænas, var., doz. ...	12	0		48	0	„ major „	4	0		6	0
Ericas, per doz. ...	8	0		12	0	Solanums „	4	0		6	0

**Motor versus Horse.**

It has been abundantly apparent for some time that the usefulness of the motor could not be limited to road traction, and the chief objections to the swift motor on the public highways are of no account as regards work in the fields. Highways are public property, the fields are private, and the farmer is at liberty to use any form of power he thinks the cheapest and most applicable to his business.

Well, the agricultural difficulty has for the last twenty years lain in the well nigh impossibility of applying steam power to farm work. The steam engine has been too bulky for active work on the land—i.e., for any work such as is done by horse power; but the advent of the petrol motor has altered all that, and it would certainly appear possible for all the work of a large farm to be performed by the aid of petrol. This certainly seems to be a big order, but no one who lives near a great trunk road would doubt that the farmer could go round his farm on a petrol-driven motor cycle or tricycle, and, as a fact, ordinary cycles are now largely used by farmers. The advance in petrol motorage has been so great, that the power which was quite lately only applicable to personal conveyance is now usefully employed for field work.

In our opinion, the only question has been that of cheap traction, and if that has been solved the day of the farm horse is gone. That the motor on wheels can compete with the horse on metalled roads cannot be denied, but so far few farmers would acknowledge that it is possible to produce an engine which can proceed up and down a field in the same manner as a team of horses, and at the same time draw a plough, drag a set of harrows, doing good work at a low price.

Yet such is the fact. Recent trials in Bedfordshire have most conclusively proved that the motor can do any work as well as and more cheaply than the horse.

The trials proved that land could be ploughed 7 in deep for 7s. 8d. per acre, a crop of Wheat could be cut for 1s. 7d., and a crop of grass for 1s. 9d. per acre, whilst straw could be chaffed at about 2s. 6d. per ton. Now, we know very well that land can be ploughed by steam at 8s. per acre, and to a good depth, but when the cost of coals and the leading of water are considered the work of the motor must be far the cheapest.

We have discussed the question of motor traction with many practical farmers, and it is natural that every man who is fond of a horse should be averse to dispensing with its services and adopting an alternative without good reason. Therefore we meet with most abundant criticism, but the objections may be roughly summarised under two heads—viz., “expensive outlay on plant” and “the doubt whether motors will work on very soft or sticky soil.” For instance, many farmers who would believe in a motor dragging a plough on a piece of seeds or stubble, have no faith in its practicable working on recently mowed soil. There is also a strong belief that the wheels of a heavy motor will have a serious effect in “saddening” the soil. As the Ivel motor, which we have in mind, only weighs 28cwt, each of its three broad wheels carries less than half a ton, and we should very much doubt that the passage of these three

wheels, over even very soft land, would do as much damage as an average pair of draught horses, while they would in all probability do at least twice, or even three and four times the work. We notice that the makers of these engines conducted their ploughing experiments on what they describe as “very hard ground.” The wheels of the motor would therefore get ample purchase, but we think that some good proof is required that they will travel as well on a soft surface. We have had much practical experience of the working of rotary Potato-diggers, and know well how their driving-wheels skid in very loose mould, and we fear that under some conditions these motors will make but very slow progress at their work.

As regards the outlay, no doubt there are many farmers who could not afford to lay down £300 on what is as yet only in the experimental stage. If a farmer were to sell his horses and buy a motor with the money, he would require at least ten average farm horses to realise the necessary amount, and the prime cost will be a great bar to their soon coming into general use. They will be introduced first on large farms, and by land-owners on farms in hand, in fact, several noblemen have already tested and speak highly of them. They will at first be used only partially to supplant the horse, but the work they will do now gives such great promise of what they can by improvement be made to do that, although they may not entirely take the place of horses, we are confident that they will do so to a very considerable extent.

In one experiment with a 3-furrow plough, 11½ acres were ploughed in 17½ hours by the use of 25½ gallons of petrol, each acre being completed in 1½ hours, with very little more than 2 gallons of petrol. Then the motor only eats when it is at work, while the horse requires feeding whether there is work to do or not. Horses cannot be kept without incurring loss from disease and accident, as well as veterinary bills. Motors require repairs and renewals, and are also liable to accident; but the cost of these items may be calculated with certainty, which cannot be done in the keeping of horses.

Every year the difficulty of obtaining horsemen is an increasing one; waggoners keep asking higher wages, and are less inclined to work. This independent spirit on their part must have considerable effect on farmers who may think of trying motor power. Labourers will be needed as much as ever to do hand work, but lads of fifteen years to twenty years will largely be dispensed with.

Work on the Home Farm.

After a promise of better things the weather has reverted to its old ways, but adding thereto a touch of snow. Perhaps there is yet worse to come, for we have to-day seen what is to us a record flock of golden plover—about 300 or so. Does such a congregation denote the approach of severe weather? Only on the lightest land is horse work possible, and autumn Wheat sowing is being given up in despair in many quarters.

Martinmas week is to many farmers a period of enforced inactivity, the farm servants having left and new ones not arrived, the farms are very short-handed. Mangolds are being pulled and stored, but the carting is very heavy work, and the carts are but partially filled. As we have observed before, the roots are undersized and the crop below the average in weight. Fortunately the weather, which has been too cold and wet for Mangolds, has suited Swedes, and they are now very good. We never saw them of such soundness and quality. When they are a little riper a good lot must be pried to help out the Mangolds in the spring.

We got some manure carted out to the seeds, but it was very laborious work. The manure is wet and heavy, and even the seed land is too soft to take heavy loads on. We should like to get the remainder on at once, as there is hope that we shall soon see the steam ploughs here to break up the swarth, in readiness for next year's Potatoes. These ploughs are now making very long days and doing most valuable work. They can go where horses would stick fast or do more harm than good. Rams and ewes must be parted now if they are still together. The rams are best put with the feeding sheep, i.e., the wether sheep, as it does not pay to keep them badly and let them get into poor condition.

The November slump in the beef trade is over and prices are firmer again, the top quotation being 7½d. per lb. This is promising for the Christmas beef feeders. On enquiry we find that not so many cattle as usual are being prepared for Christmas. Store cattle are rather depressed. Threshing has not provided much spare money to buy stores with, and bank balances are low. Small and lean sheep are in the same fix, there being few buyers just now, notwithstanding the abundance of food. Milk cows are as dear as ever, which should remind us that no opportunity should be lost of starting heifers breeding. Now is the time.

PLANTING SEASON



PAULS' ROYAL NURSERIES

WALTHAM CROSS, HERTS.

12 miles from London. South Entrance four minutes' walk from Waltham Cross Station; West Entrance three minutes' walk from Theobald's Grove; both Stations on the Great Eastern Railway.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Gold Medals in 1903 from Royal Horticultural and Royal Botanic Societies.

FRUIT TREES for the Orchard, Garden, and Forcing House. Hogg Memorial Medal, 1901.

HARDY TREES for Streets, Parks, and General Planting. Silver Medal from Royal Agricultural Society of England.

SHRUBS, both Evergreen and Deciduous.

CLIMBING PLANTS, Hardy and Greenhouse.

RHODODENDRONS, CAMELLIAS, & AZALEAS.

HERBACEOUS PLANTS in great variety.

BULBS and SEEDS, and all Garden Sundries.

PRICE LISTS ON APPLICATION. INSPECTION INVITED. Upwards of 1000 Medals, Prizes, and other Awards at leading Exhibitions during the past 42 years.

SOLE POSTAL ADDRESS—

WM. PAUL & SON,

WALTHAM CROSS, HERTS.

Rose Growers by Appointment to His Majesty the King.

GRAPE VINES in POTS

Extra Strong Fruiting and Planting Canes in all Leading Varieties.

FIGS IN POTS

All Leading Sorts.

Bushes and Fan-trained for Walls.

DICKSONS Nurseries CHESTER

RIVERS'

FRUIT TREES,

ROSES, VINES,

FIGS, ORANGES,

AND

Orchard-House Trees.

A LARGE AND SELECT STOCK ALWAYS ON VIEW.

ILLUSTRATED & DESCRIPTIVE CATALOGUE, Post Free, 3d.

THOMAS RIVERS & SON,

SAWBRIDGEWORTH, HERTS.

HARLOW STATION, G.E.R.

No. 1223.—VOL. XLVII., THIRD SERIES.

CLIBRANS
SELECTED TREES.

For Avenue, Street, Park,
or Cemetery Planting.

FOR immediate effect; all are grown singly, regularly transplanted, and thoroughly well-rooted, ensuring safe removal to any situation.

	Feet.	Each.	Dozen.
Acer , <i>Dasycarpum</i> ..	8 to 10 ..	2/6 & 3/6 ..	24/- & 33/-
„ <i>Schwedleri</i> ..	8 to 10 ..	2/6 ..	24/-
Acacia (<i>Robinia</i>), Common ..	5 to 6 ..	8d. ..	7/-
„ „ „ ..	6 to 8 ..	1/6 ..	12/-
„ „ „ ..	8 to 10 ..	2/- ..	18/-
„ <i>Inermis</i> (Mop-Headed) Standards ..	5 to 7 ..	2/6 ..	24/-
Ash (<i>Fraxinus</i>), in variety ..	6 to 9 ..	2/6 ..	24/-
„ Common ..	8 to 10 ..	2/6 ..	24/-
„ „ ..	10 to 12 ..	3/6 ..	36/-
„ Mountain ..	8 to 10 ..	2/6 ..	24/-
„ „ ..	10 to 12 ..	3/6 ..	36/-
Beech (<i>Fagus</i>), Common ..	8 to 10 ..	2/6 ..	24/-
„ „ ..	10 to 12 ..	3/6 ..	36/-
„ Purple ..	8 to 10 ..	3/6 & 5/- ..	—
„ „ ..	10 to 12 ..	5/- to 10/6 ..	—
Birch (<i>Betula</i>), Silver ..	8 to 10 ..	2/- ..	18/-
„ Weeping ..	10 to 12 ..	2/6 to 3/6 ..	—
„ <i>lacinata pendula</i> (Cut-leave) ..	8 to 10 ..	3/6 ..	—
„ „ ..	10 to 12 ..	5/- ..	—
Cherry , Double Flowering Standards ..	6 to 8 ..	3/6 ..	36/-
Chestnut , Horse ..	8 to 10 ..	2/- ..	18/-
„ „ ..	10 to 12 ..	3/6 ..	36/-
„ <i>rubicunda</i> (Scarlet) ..	8 to 10 ..	3/6 & 5/- ..	33/- to 42/-
„ Double White ..	8 to 10 ..	5/- to 7/6 ..	—
„ Spanish (<i>Castanea vesca</i>) ..	7 to 9 ..	3/6 ..	36/-
Elm , English (<i>Ulmus Campestris</i>), from buds and grafts; of handsome erect growth ..	8 to 10 ..	3/6 ..	—
„ Wych (or Scotch) ..	8 to 10 ..	2/6 ..	24/-
„ „ ..	10 to 12 ..	3/6 ..	36/-
„ <i>Dovasi</i> ..	8 to 10 ..	2/6 ..	—
„ „ ..	10 to 12 ..	3/6 ..	—
„ Giant Canadian or Huntingdon, from buds and grafts ..	8 to 10 ..	3/6 ..	36/-
„ „ ..	10 to 12 ..	5/- ..	60/-
„ <i>Louise Van Houtte</i> , golden foliage ..	7 to 8 ..	2/6 ..	24/-
„ „ ..	8 to 10 ..	3/6 ..	36/-
Laburnum , English ..	8 to 10 ..	2/6 ..	24/-
„ „ ..	10 to 12 ..	3/6 ..	—
„ Scotch ..	7 to 8 ..	1/6 ..	—
Lime (<i>Tilia</i>) ..	8 to 10 ..	3/6 ..	36/-
„ „ ..	10 to 12 ..	3/6 to 7/6 ..	36/- to 75/-
„ Larger, extra fine specimens, 10, 6 and 12/6 ..	—	—	—
Maple (<i>Norway</i>) ..	8 to 10 ..	2/- ..	18/-
„ „ ..	10 to 12 ..	3/6 ..	36/-
„ „ ..	12 to 14 ..	5/- ..	55/-
Plane (<i>Platanus acerifolia</i>), an excellent tree for smoky districts ..	8 to 10 ..	3/6 ..	30/-
„ „ ..	10 to 12 ..	5/- ..	—
„ extra specimens, 7/6 to 21/- each ..	—	—	—
Poplar (<i>Populus</i>), <i>Argentea</i> ..	8 to 10 ..	2/6 ..	—
„ „ ..	14 to 16 ..	5/- ..	50/-
„ <i>canadensis nova</i> ..	10 to 12 ..	2/- ..	—
„ „ ..	12 to 14 ..	3/6 ..	—
„ <i>Lomlardy</i> ..	10 to 12 ..	2/- ..	18/-
„ „ ..	12 to 14 ..	3/- ..	30/-
„ „ ..	14 to 16 ..	4/- ..	40/-
Prunus <i>Pissardii</i> (Purple-leaved Plum) ..	6 to 8 ..	2/- ..	18/-
Sycamore ..	10 to 12 ..	2/6 ..	24/-
„ „ ..	12 to 14 ..	3/6 to 5/- ..	36/- to 50/-

SEND FOR CATALOGUE,
GRATIS AND POST FREE.

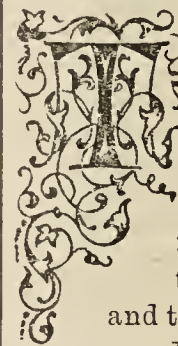
ALTRINCHAM & MANCHESTER



Journal of Horticulture.

THURSDAY, DECEMBER 3, 1903.

Plants with Possibilities.



HERE are some plants which seem to possess wonderful fascinations for cultivators, and king of them all perhaps, at the present day, is the Chrysanthemum. At the moment of writing the show season is at its height, and thousands of enthusiastic adherents are doing homage at the shrine of the Autumn Queen. As is usual at this season, both the pessimist and the critic are on the war path. The latter is preaching his annual crusade against big blooms, and telling us how the beauty of the flower is lost through the efforts of cultivators to produce the flowers that grace the exhibition boards. There is doubtless a good deal of truth in what the critic says, but the story has been told so often that we have got used to it, and it seems not to have the slightest effect or lessened the production of big Chrysanthemums.

The wail of the pessimist is the same as we heard last year and the year before. It predicts a decline in the public taste for large blooms, and foretells the downfall of Chrysanthemum shows. Perhaps at some future date the prediction will come true; but judging from the general interest again displayed this year, there seems no likelihood of either Chrysanthemum shows or massive blooms becoming things of the past yet awhile. It is said by some that the present interest in show Chrysanthemums is kept alive by the tempting baits that are offered to exhibitors in the shape of challenge cups and substantial prizes; but I am by no means inclined to accept this statement without question.

Growers and others, however, seem to overlook the possibilities of the plant. The Chrysanthemum is a flower possessing wonderful capacities, and herein may be found the secret of its remarkable popularity. In the

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

hands of an expert grower the ever-ready Chrysanthemum ceases to be a natural and becomes an artificial flower—if the term be accepted. In fact, it is just what the grower makes it, and herein the charm consists. Under ordinary cultivation Nature will produce a Rose perfect in form and substance, but Nature unaided will not produce a Chrysanthemum flower of show standard, and when such is obtained the grower knows that the credit belongs very largely to himself and his own skill. While this is so, shows may be abolished and prizes withheld, but large Chrysanthemums will be grown if only to illustrate the prowess of the cultivator. What a Chrysanthemum flower is depends almost entirely on the treatment the plant receives, and ample evidence is afforded of this in the case of certain varieties that are gems when seen on the showboard, but if cultivated on ordinary, commonplace lines, they would hardly be recognised as the same.

Coupled with the possibilities of the plant are its glorious uncertainties. Looking back over the years that are past, one can see the part that the Chrysanthemum has played in British floriculture; but who will be so bold as to say that the plant is played out? The development of cultivation has been wonderful; the varieties raised almost innumerable, and still there is the future. Who knows what it has in store for the plant that has captivated the hearts of all sorts and conditions of cultivators, from the millionaire on the one hand, to the humble artisan or labourer with his home-built greenhouse on the other? And the possibilities of the Chrysanthemum are largely responsible for it all. I will admit the usefulness of the plant, its beauty, its accommodating nature, and all else that can be said for it; but, after all, its present position is due to the fact that it is amenable to cultivation, and readily responds to the skill of the grower.

* * *

It is not a far cry from the conservatory to the kitchen garden where big Onions come in for reproaches at the hands of the critic who can see nothing but ugliness in large vegetables. Yet big Onions continue to be grown year by year. Why is this? For exhibition, some may say, and in a measure this is true, but not entirely, as there are many who take a pride in "big Onion" growing and never show them at all. The fact is, the Onion is in the vegetable garden what the Chrysanthemum is in the floral department, inasmuch that it is a plant which lends itself to cultivation, and possesses wonderful possibilities. I know men who spend time and money every year in trenching and manuring and raising plants, and they seem to begrudge neither the labour nor the expense that is bestowed on the Onion bed, and it is all for the satisfaction of obtaining bulbs that will turn the scale at two pounds weight or more. It would be absurd to say that big Onions are grown primarily for the kitchen, because bulbs one quarter the size and produced at one quarter the cost are more useful in that department; but there is a certain fascination about Onions that is attractive to growers. It is a plant possessing possibilities, and responds readily to liberal treatment; consequently the enthusiastic vegetable grower finds in the Onion something on which he can bestow his cultural skill and see the results. It matters nothing to him whether the giant bulbs are the least useful and profitable; they are unique and out of the common, and in pointing to them he is able to say that Dame Nature would not have produced them without his aid.

* * *

Occasionally I read reports of the shows of one of those unique Lancashire institutions known as Gooseberry Clubs, and am surprised at the weights and dimensions of some of the berries staged. Long before critics began to rail about size, Gooseberry Clubs existed, and competitors adopted the many devices best known amongst the Lancashire Gooseberry growers for the production of giant fruits. This cult is confined practically to the one county, and many of the large berried varieties originated in it. It is generally admitted that large Gooseberries are wanting in flavour compared to smaller varieties, but what does the Lancashire weaver care about that? He grows for size and weight, and Gooseberries to him are what Chrysanthemums and Onions are to other classes of cultivators [?] In fact, I mention the instance as an illustration of a plant possessing possibilities, and those possibilities being put to the test by enthusiastic cultivators. Thus it happens that certain subjects amongst fruits, flowers, and vegetables stand out conspicuously above their fellows in general popularity. They may have beauty or usefulness to recommend them, but above all they will generally be found to possess possibilities, either in their adaptability to development at the hands of cultivators, or their readiness to respond to the skill of the hybridiser. In

short, to the gardener, possibility is a word with a meaning. In almost everything he does, he sees a vision of what might be, which urges him forward; and what matter if the vision never actually becomes reality? In attempting something great, he invariably does something meritorious.—G. H. H.

County Council Instruction: Horticulture.

(Continued from page 489.)

ISLE OF MAN.—We have no Horticultural Instructor in connection with this Council.—A. ROBERTSON, Town Clerk, Douglas.

SOMERSET.—The names and addresses of the County instructors in this County are as follows: County Instructor in Agriculture, Mr. J. H. Burton, M.Sc., Spring Villa, Clevedon Road, Weston-super-Mare; County Instructor in Horticulture, Mr. John Ettle, F.R.H.S., Stanley Grove Road, Weston-super-Mare; County Instructor in Poultry Keeping, Mr. C. E. J. Walkey, 2, Malvern View, Stanley Grove Road, Weston-super-Mare.—C. H. BOTHAMLEY.

STAFFORDSHIRE.—There are in this County thirty-one practical gardening classes, at each of which twelve pupils receive instruction. I enclose herewith a copy of the directory of this committee, on page 65 of which all information relating to the classes will be found. Our Horticultural Instructor is Mr. Robert Cock, F.R.H.S., 11, Meyrick Road, Stafford.—GRAHAM BALFOUR.

SURREY.—Mr. J. Wright, F.R.H.S., V.M.H., of 8, Rose Hill Road, Wandsworth, S.W., is chief instructor and inspector. The Surrey C.C. has no central experimental garden for training professional gardeners. The Surrey routine is (a) affording instruction to amateurs and cottagers on vegetable, fruit, and flower cultivation, for making their gardens as productive and their homes as attractive as possible; (b) conducting experiments with various manures on all kinds of important garden crops on differing soils in suitable districts; (c) conducting trials of the more useful vegetables for ascertaining the best varieties to cultivate; (d) instructing over 300 youths (each on a separate plot) in the "principles and practice involved in the profitable cultivation of a cottage garden or allotment." Training and encouraging the sons of the industrial classes to become hearty, intelligent, expert workers on the land is a prominent object in the Surrey garden teaching. Many of the youths do their work as well as any man could do it, and have, on the average, increased the productivity of their plots by over 100 per cent since the teaching commenced. All work under identical conditions in the supply of seeds, manure, and instruction, and are rewarded by prizes and certificates according to the merit marks obtained. Over 5,000 crops have been grown this year. Assistant instructors are Mr. Alex. Dean, F.R.H.S., and Mr. Horace J. Wright, F.R.H.S.

SUSSEX.—The name of the lecturer on horticulture engaged under the Education Committee of the East Sussex County Council is Mr. W. Goaring, Haywards Heath, Sussex. I herewith enclose copy of the prospectus of the Agricultural and Horticultural College, Uckfield. If you will refer to page 20 you will find the syllabus of the lectures which are delivered in the county, also particulars of the fruit garden at the training farm attached to the said college are given in the prospectus.—EDWIN YOUNG, Secretary, County Hall, Lewes.

WARWICKSHIRE.—The County Instructor in Horticulture is Mr. H. Dunkin, Coventry Road, Warwick.—A. H. WHIPPLE.

WESTMORELAND.—No permanent Instructor in Horticulture has been appointed, but arrangements have been made for the following to give lectures, demonstrations, &c.: Mr. E. W. Payne, Fulwood Park Nurseries, Preston, and Mr. G. Shotton, Pant House, Felton, Northumberland. We have no experimental garden.—CHARLES J. R. TIPPER, Secretary, Lowther Street, Kendal.

WILTS.—The Instructor is Mr. T. Sharp, Westbury, Wilts. No garden.—C. H. COBBETT, County Offices, Trowbridge.

WORCESTERSHIRE.—The Instructors in Horticulture are Mr. James Udale, Ombersley Road, Droitwich (appointed September, 1891) and Mr. Joseph Lansdell, St. Wulstan's Crescent, Worcester (appointed September, 1899). There is a county experimental garden at Droitwich, established January, 1896, of which Mr. James Udale is superintendent. There are also eighteen centres in the county for the instruction of youths in the theory and practice of horticulture, under local teachers, at which 275 youths receive instruction, the whole being under the supervision of Mr. Udale.

YORKSHIRE.—Professor Seton writes: The clerk, Joint Agricultural Council, County Hall, Beverley, and the director, Education Department, County Hall, Wakefield, have handed me your letters, and in reply thereto I may say that our Instructors on Horticulture are (1) Mr. Thos. Redington, (2) Mr. Alfred Gant. Assistant Instructor, Mr. Frank Redington. Letters addressed to "The Yorkshire College, Leeds," will find each of the instructors. The old kitchen garden at the Manor Farm, Garforth, has been slightly extended for the purposes of experimental work. The prospectus of this department, and an illustrated pamphlet, which I send, may interest you. I also enclose a copy of the "proposals" of the Yorkshire Council for Agricultural Education, in which you will find full particulars regarding the educational gardens established by the Council throughout the County.—R. S. SETON, Department of Agriculture, Yorkshire College, Leeds.

**Vanda cœrulea.**

Vanda cœrulea is one of the most popular in the genus, its beautiful blue flowers never failing to arrest attention. It is often treated to far too much heat, and is never so satisfactory as when growing in a light, airy house not any warmer than where *Cattleyas* thrive. Its roots seem to delight in being packed closely together, consequently small pans or baskets only should be used. Its flowers appear in autumn, when Orchids usually are scarce, and lasts well in good condition till December. A smaller species, *V. cœrulescens*, comes from Burmah and makes a very pretty basket plant. The spikes are many-flowered, these individually being pale mauve, with a deeper purple or violet lip.—A BRISTOL GROWER.

Vanda insignis.

Vanda insignis is a strong growing plant, flowering in early summer, its blossoms large, the sepals and petals yellowish brown, the lip rose and white. It likes a moderate heat. The popular *V. Kimballiana* is one of the finest of *Vandas*, easily grown in a cool, light house, and presenting a fine flowering return for the little trouble necessary in its culture. It may be grouped several together in flat pans or baskets, or grown as single-stemmed plants. I prefer the latter plan, as made-up plants do not always flower all over simultaneously, while the restricted rooting space is also beneficial. This plant dislikes overhead watering, but a slight spray on hot days may be allowed.—B. G.

"The Orchid Review."

This interesting magazine of Orchidology for last month contains notes on the collections at Kew, Chelsea, Bradford, and Highbury; also communications and notices in reference to *Cattleya x granulosa*, *C. x Hardyana*, *Masdevallia tovariensis*, &c.; Orchids from seed, Reversion in *Odontoglossum*, and other subjects. The price is 6d. monthly, from the Editor of "The Orchid Review," Lawn Crescent, Kew.

PHAIOCYMBIDIUM x CHARDWARENSE.

We are indebted to "The Orchid Review" for the following references and descriptions of this new bigeneric hybrid. Our illustration is from a drawing by Mr. G. Shayler. "It may be remembered that last year a very remarkable hybrid from the collection of G. F. Moore, Esq., Bourton-on-the-Water, was exhibited under the above name (*O.R.*, x., pp. 117, 190). Two flowers have now been sent by Mr. Moore's present gardener, Mr. W. Page, with the following note:—'The enclosed is a supposed hybrid between *Phaius Wallichii* x *Cymbidium giganteum*. It has been shown at a R.H.S. meeting, and there was some doubt as to its parentage by those who saw it there, but according to the records of our seedlings, it must be correct, because it is the only *Phaius* cross recorded. The plant, so far as I can see, is identical with *P. Wallichii*; there is nothing in the growth of the plant to suggest *Cymbidium*, but the flower certainly looks to me as though it has *Cymbidium* strain in it. We have about two dozen seedlings, three of which are in flower, and are the same as the samples sent.' The two flowers sent are typical *Phaius* in structure, but one is much smaller than the other, the sepals measuring respectively 1½ in and 2½ in, while the spur of the larger is five lines long, and the other only three lines. The sepals and petals are deep yellow at the back, slightly suffused with light coppery brown in front in the smaller flower, and more strongly so in the larger. The ground colour of the lip is deep yellow, striated throughout on the inside with deep maroon brown. The margin is distinctly undulate, while on the disc of the larger flower occurs a pair of fleshy keels, and a few short hairs on the surface of the lip. Mr. Page has pollinated one of the flowers with *Cymbidium giganteum*, to see whether a second crossing will not bring out more of the *Cymbidium* character. It is interesting to note that there are also seedlings obtained from *Zygopetalum x Mackayi x Cymbidium giganteum*, and Mr. Page remarks that they seem large enough to flower at any time. The event will be awaited with curiosity, as it may prove to be another case of monolepsis. We should like to see an attempt made to reverse these crosses. It must now be added that the plant was exhibited at the R.H.S. meeting on October 27 last, and was awarded a First-class Certificate. It was like a strong *Phaius Wallichii*, with spikes over a yard high, and was very effective."

The Week's Cultural Notes.

Now that work among Orchids is slack, it is well to look round and see in what way the press of work later on may be

eased, and what can be carried out now. Those who take a real interest in their work will always find something requiring attention. *Thunias*, for instance, are now quite at rest, the leaves all fallon, and the annual roots dead, their work being over. These do not really need repotting for another month or two, but this would bring us to a busy time, and as they can be repotted now with just as satisfactory results, it is well to do so.

Preparation of the compost will be the first consideration, good fibry loam mixed with a third of peat, and a liberal sprinkling of chopped sphagnum and finely broken crocks making an excellent medium for the new roots. Many growers mix a small quantity of a good concentrated manure or a larger amount of dried cow manure with it, but though a stronger growth may result I should advise beginners to be very careful in the use of either. A 5 in pot is quite large enough for the strongest of single stems, but when three or five are grouped together the pots must be larger in proportion, and in all cases especially well drained plants with several stems make a fine show; but the principal objection I have to them is the fact that the stems do not always flower simultaneously, and then the result is not pleasing. After repotting, the specimens must be stood in a warm house, and the compost kept quite dry until growth, and eventually roots, make their appearance. It may be noted that growth in all cases precedes root action, and although few Orchids like more moisture than healthy-growing plants of *Thunias*, yet just at this stage mentioned they may be ruined by an overdose of water.

Much the same may be said of the Indian Crocuses, as the various species of *Pleione* are called, but as the flowers of these charming plants appear in the centre of the young forming growths, and not at the apex like those of *Thunias*, it follows that the dry state must not be unduly prolonged, for often roots are to be seen starting at the time of repotting. The deciduous species and hybrids of *Calanthe*, too, may have attention as soon

**Phaiocymbidium x Chardwarensense.**

as the flowers are past, the treatment being almost exactly the same as for *Thunias*. Being dwarfs, the plants may be placed close up to the glass on a shelf in the lightest part of the East Indian house.—H. R. R.

PRINCIPLES OF AMERICAN FORESTRY.—A volume of 334 pages, with seventy-three illustrations, mostly half-tones, has just been issued by John Wiley and Sons, New York. The author is Samuel B. Green, of the University of Minnesota. The work is exceptionally practical and readily adapted to the beginner, and valuable as well to him who has already made extensive plantings.

PROTECTION OF FRAMES.—Do not leave necessary protecting until severe frost or snow arrives. If the frames are of brick or wood, and rise some distance above the ground, they will require at least a foot wide of leaves or straw manure boxed in all round them. Have the protecting materials as dry as possible and board over the top snugly to throw off water and snow. Mats and wooden shutters should be had in readiness. Give the latter a coat of paint, both for appearance sake and to make them wear. Where frames are level with the ground a thick bedding of litter or leaves over the surface of the ground will exclude a lot of cold.

NOTES

NOTICES

Guildford Chrysanthemum Show.

The secretary of the Guildford Chrysanthemum Society sends us a newspaper report of the recent show, which he says was highly successful and very meritorious. Two weeks ago we described one of the groups that was shown there, and which was a model in effective arrangement.

Trinity Grove and its Gardener.

It is with much pleasure that we notify the honour done to Mr. A. McKenzie, the gardener at Trinity Grove, Edinburgh, by a Leith newspaper, which gives his portrait and a biographical sketch. Trinity Grove is the residence of the Provost of Leith, and is endowed with memories of past notabilities, and the gardens are the most charming of any having a suburban character that we have seen.

Annual Meeting of the N.R.S.

The twenty-seventh annual general meeting of the National Rose Society will take place at the rooms of the Horticultural Club, Hotel Windsor, Victoria Street, Westminster, on Thursday next, December 10, at 3.30 p.m.; to receive the report of the committee; to pass the accounts; to elect the committee and officers for the ensuing year; and for a proposed alteration of By-Law 5 and Regulation 1. The annual dinner will take place immediately after, Mr. H. V. Machin, vice-president, in the chair.—E. MAWLEY, Hon. Sec.

Practical Help in Plant Naming.

In the Brighton Museum, observes the "Daily Chronicle," a plan has been adopted that is of great interest and educational value. Persons are encouraged to bring in fresh bunches of local wild flowers, culled during their walks, to one of the officials, who arranges the specimens each morning in glass vases containing water, and affixes both the botanical and English names. It is pleasant to see the air of refreshment with which the surprised visitor, jaded by a weary round among geological specimens, stuffed animals, &c., pauses before the stand containing the vases and looks for the name of some flower whose prettiness has struck him in his rambles, and to which he now, as it were, obtains a formal introduction.

Mutual Improvement Societies.

The Paignton (Devon) gardeners had a "Question Night" on the occasion of their recent meeting. Questions as follows were put: Do you consider Parsley a vegetable or a herb? Are Antirrhinums, Gladioli, and Roses perennials? What is the best and safest treatment for scale on Pear trees? From what section of Carnation is the Malmaison raised? Do you know a more interesting and diversified family than Solanums? * * The Devon and Exeter Society was to have had Mr. Shrivell to lecture on Chemical Manures, but having missed his train in London he could not reach Exeter. The meeting therefore (which had assembled) proceeded to deliver itself of the experience held by its members on the subject, and a profitable evening was passed.

The Golden Flower.

On reading the remarks in last week's number, page 491, under the heading: "The Golden Flower," I find your photographic correspondent has got mixed in reference to Mr. G. Hall's exhibit of 12 incurved Japs, which you say won for him the silver challenge cup and a gold medal. In the first place the challenge cup was awarded to Mr. Hall for 36 Japs, 12 varieties, 3 of each, shown in vases, and better flowers, I am sure, have not been seen this year; and, secondly, I feel sure the 12 incurveds illustrated in the Journal did not belong to Mr. Hall. Your correspondent told me that he had an unfortunate accident with the plates of the best exhibits, and hence the confusion in the description that appeared. I hope you will, in justice to Mr. Hall, have the matter corrected.—C. S. FUDGE, Southampton.

[We relied on the notes sent by our correspondent, and regret that a mistake was made. It is especially satisfactory to be able to say now that Mr. Hall's flowers were of such high excellence.—ED.]

The R.H.S. Journal.

The volume up to October has been issued, but our review of its contents has had to be held over for another week.

Mr. W. Horne sen.

We regret to learn that Mr. W. Horne, of Perry Hill, Cliffe, near Rochester, has had a very serious illness, and was unable to be present at the sale of fruit trees and Potatoes held by his firm last week. There was a slight improvement in his condition on Monday.

Gardening Appointments.

Mr. H. Foster, for some years foreman in Hadsor House Gardens, Droitwich, and formerly of Strathfieldsaye and Warwick Castle, has been appointed head gardener to F. E. Muntz, Esq., Umberslade, Warwickshire. * * Mr. A. Garner, late foreman in the gardens at Wellesbourne House, Warwick, has been appointed head gardener to General Gunter, at Boston Hall, Boston Spa, Yorkshire.

Sheffield Chrysanthemum Show, 1904.

The Sheffield Chrysanthemum Society's next show will be held on Friday and Saturday, November 11 and 12, 1904. Judges: Messrs. H. J. Jones, D. B. Crane, H. Weeks, and T. Welch. The schedule is being thoroughly revised and brought up to present requirements, and will be issued early in the new year. Readers may have one by sending a post-card to Mr. M. H. Willford, secretary, 96, Greenlawn Street Walkley, Sheffield.

Liverpool Botanic Gardens.

The Begonia Gloire de Lorraine is grown here in large quantities, and the plants are arranged in masses along the front staging of the warm houses, interspersed with groups of Cattleyas and other choice Orchids and Ferns. Especially noticeable is the effect created by large baskets filled with this Begonia, hung throughout these houses. Later batches are in readiness to keep up the supply, so as to extend over as long a period as possible. We are pleased to hear that this has been a record year as regards numbers passing through the houses—hundreds of the general public taking the advantage placed before them. For general floral display these gardens are second to none, and must be most gratifying to the Parks and Gardens Committee in having such a "curator" in charge.—J.

Missouri Botanical Garden Destroyed.

In our issue for July 18 this year, Shaw's garden described from its foundation to the present. This garden, we now learn with regret, was visited by a most destructive fire early Saturday morning, November 7. The boiler house, which supplies heat for the Orchid range and several of the growing houses, was completely destroyed. Half the East India and Mexican houses were a wreck, as were also portions of the Orchid and succulent propagating houses. From a monetary standpoint it is estimated that 1,000 dollars will cover the loss to the buildings, and 2,500 the loss in plants. The latter loss is much greater than the figures indicate, as a large number of species and varieties, 200 in number, will require years to replace. This is especially true in the Orchid houses, which, while not destroyed entirely, were subjected to heavy smoke and intense heat. The collection of Selaginella, representing 28 species, was completely destroyed, the heat being so intense that the heavy zinc labels were melted down to the soil in the pots. Among the varieties lost were a number of Staghorn Ferns, such as *Platycerium grande* and *P. æthiopicum*. Among the Palms were single and grand specimens of *Licuala grandis* with a spread of 10ft; *Martinezia caryotæfolia*, *Licuala Jeananceyi*, *Dæmonorops Melanochaetes*, *Chamædorea Ne Plus Ultra*, *Hyophorbe Verschaffelti*, and *Linospadix Petrickiana*. The Nepenthes, insectivorous plants, and many of the finest Anthuriums, such as *A. Veitchi*, were badly damaged. Of the collection of Orchids, which comprised about 600 species and varieties, there were only 75 species uninjured. A remarkably fine specimen of *Cattleya Percivaliana*; *Angræcum sesquipedale*, all of the Vandas, and perhaps the finest collection of Florida Orchids in the United States, are in the ruins. *Cypripedium* x *Wm. Trelease*, a cross between *C. Rothschildianum* and *C. Parishii*, was also badly damaged. It was one of the most beautiful *Cypripediums* in the garden, and was highly prized, as it was named in honour of the director of the garden.

Gardeners' Proverbs.

We do not often find a gardener represented in a novel or play as one of the characters, but there are specimens, and these show some variety. We have a gardener appearing as a man who has plenty to say upon many subjects, and rather inclined to be jocose. Again, we have the gardener quite different, not at all inclined to talk, not even about the weather and his plants, unless questioned, with a suspicion of sulkiness! The latter description is exaggerated, yet it comes nearer to the character of the average gardener, who is usually a thoughtful man, therefore, like most thinkers, not inclined to be voluble. One thing we notice about gardeners of the past—they were somewhat fond of quoting proverbs. These were of two kinds—proverbs or sayings connected with the weather and garden work, and proverbs which had a reference to the influence of plants upon human life. That all these rested only upon fancies we would not assert.

One saying, familiar to many farmers and gardeners, has naturally been discussed this moist season. It exists as a five-lined versicle, but in its briefest form is simply thus: "Oak, smoke; Ash, splash," which sounds enigmatical. An old belief was that the season's prospects were indicated by the leafing of the Oak and the Ash. If the Oak had the start, a smoking hot summer might be looked for, but if the Ash took the lead, then the splashing of frequent showers was foretold. There could be no question about the wetness of the summer of 1903; the doubtful point is, which tree came first into leaf. Both are rather late, and often expand their buds about the same date. Conflicting statements have come from the observers of Nature in our island, but the majority seemed to think that the Ash was in advance of the Oak. Just now, we are hearing people allude to the notion that an abundance of wild berries portends a hard winter, especially when there is a great display upon the Sloe or Blackthorn.

"Many stones, many groans" is a common saying in the West of England, alluding to the poverty and illness that may be expected, though it has been argued it applies to the indigestible character of the fruit. But really, this is a mere fancy; some of our recent mild winters have been marked by a profusion of berries. The truth is, the abundance or scarcity of these depends upon the number of blossoms, and how far the autumn favours their development into fruits. Many have doubted whether "A green Christmas makes a fat kirkyard" is true, as a mild winter favours the weakly and aged. But then it has been remarked that the green Christmas is apt to be followed by a cold and stormy spring, which is distinctly unfavourable to health.

In the garden more grows
Than the gardener sows.

This proverb is indeed true, and has been very much before us during the moist summer, when weeds of all sorts showed signs of rapid increase. Owing to the weather, and other interruptions, frequently gardeners could not deal effectively with many of these pests, and so saw the proverb verified that "Ill weeds grow apace." Warning of the danger of neglecting weeds lies in the couplet:

One year's seed,
Seven years' weed.

Seven years is a good while, but certainly if the common weeds are once allowed to sow themselves, we shall have trouble in clearing them from beds and borders. "Ill weeds fear no frost" is scarcely correct as to the bulk of them, though some seem unaffected by cold. No doubt, in the old style gardens, it was observable that plants we now call weeds were allowed to grow, for various reasons. Thus, a bed of the Wild Chamomile or Matricaria was a usual sight, concerning which they had a proverb, "The more you tread it, the more you spread it." It has even been surmised that the leaves were put into stews—a way of taking a bitter tonic which would not suit modern taste. Proverbs connected with Parsley tended to discourage its cultivation, which may account for persons often getting poisoned by gathering what they took to be the wild herb.

"Sow Parsley, and there will be a death," is still believed in some English counties; also it was deemed unlucky to transplant it and change the place of a bed. This is curious, because the plant was thought wholesome, and it was a symbol of victory in the Greek games. Fennel, too, had a badrepute—"He who sows Fennel sows sorrow"—yet this was one of the plants held sacred to St. John.

But I am acquainted with a gentleman who admires the plant so much that he has named his residence "Fennel House."

Eat Leeks in Lide, and Ramsins in May,
And all the year after physicians may play.

This comes rather hard upon the doctors, but certainly our ancestors were fond of pungent vegetables, and had great faith in them. But when is Lide, which we infer is earlier than May in the year? Aubrey states that Lide is March, the *loud* or roaring month, the sprouting Leeks being evidently recommended as a spring purifier. The Ramsin is said to be the wild Garlic, a somewhat offensive plant, abundant about fields and woods of the west counties. Perhaps the name was also given to the cultivated Garlic.

We may find more proverbs connected with the Apple than with any other tree, several referring to its wholesomeness as a fruit. This one cuts against the medical profession:

Eat an Apple going to bed,
Make the doctor beg his bread.

Mean people are said to "Give an Apple where there is an orchard," and a girl too particular in choosing a sweetheart suggested the proverb, "She will go after Apples till she gets a Crab." We may possibly have a doubt whether the proverb is true, that "the higher the tree, the riper the fruit"; we presume it rested upon an idea that a tall tree would get more warmth from the sun. "The rotten Apple injures its neighbour" pointed a moral; it was a reminder how soon evil influences spread themselves. Success is not to be had without effort, for "He who would have the fruit must plant the tree," but he may not have all the benefit of them; "He who loves others plants trees." Some proverbs allude to the choice of time for planting fruit trees, or removing them. "If you would have good fruit you must bury the leaf," is thought to indicate autumn as the proper season. Then we have a couplet upon the subject:

Set them at Allhallowstide and *command* them to grow.
Set them at Candlemas and *entreat* them to grow.

Probably the remark, "He's not worth a curse"—or it may be pronounced "cuss," rather contemptuous and vulgar—has been heard by most readers; it is a curious example of a word transformation. It really meant that the person spoken of was not worth a "Kers," or Cress, comparing him to a cheap and common object—a line of Chaucer's proves this. Still, the Cresses were always esteemed for their wholesomeness, though some, from their sharp qualities, were thought to affect the nose, hence called the "nose twitchers," or Nasturtiums. "Eat Cress to learn more wit" was an old bit of advice. There used to be a funny saying in Devonshire, when a girl had jilted or refused some admirer, "She has given him Turnips"; and in some parts of England people will remark to a pale person, "You have been rubbing Turnip juice into your face." The advice, "Eat Peas with the King, and Cherries with the beggar," suggests that the stones of this fruit prevent us from eating them gracefully. "It will be a nosegay to him as long as he lives" was a proverb applied to a person who had done something wrong, the effects of which would cling to him. When anybody tried to do harm but was foiled, some of the old gardeners used to say, "He jumped at it like a cock at a Gooseberry," and fowls, if they happen to get amongst bush fruit, may be seen acting just in that way.

Such comparisons as "white as a Lily," "sweet as a Rose," "cool as a Cucumber," explain themselves. "Dear as Saffron" recalls the time when that article was much valued and expensive. "Blake as a paigle," we discover, means yellow as a Cowslip. "Every Bean has its black," a reminder that nothing in our world is perfect. It seems to us that Beans must in the olden time have been much cultivated, that is, Broad Beans, for the period of sowing is referred to in several proverbs. Some partiality was shown to Candlemas, as being suitable when the weather was mild and moist.

Sow Beans in the mud,
They come up like a wood.

—J. R. S. C.

CELERY FOR RHEUMATISM.—Celery is most palatable if stewed or boiled in water till soft, drained on a hot dish, and eaten with butter melted, not melted butter. Season with salt and pepper. Seakale is excellent this way, too.—C. H., Salop.



The Uncut "Journal."

Not the *Journal of Horticulture*, which was the pioneer among gardening newspapers to cut the edges of its pages, and greatly did we welcome the change. The "Journal" referred to is that of the Royal Horticultural Society. On past occasions your correspondence columns have testified that there are others beside me who feel that, in order to satisfy a petty sentiment which dominates some Fellows of the Society, the members at large have to bear a very unnecessary infliction. Here is the latest volume of the R.H.S. Journal. It numbers 418 pages, with the exception of the advertisement folios, which *are* cut. Imagine the precious time that is absolutely wasted in the painful performance of unnecessary labour, which can be accomplished in one second by the movement of a cutting machine! It is more than annoying; and only those who have to work from early morning till late at night for their daily bread, can appreciate how irritating are little hindrances like this. Nor have all of us glass-faced bookshelves, so that the ragged edges of the Journal are like a velvet curtain, catching all the dust that flies.—CHELSONIAN.

Horticultural Travellers.

"A. N. Noyed" certainly cites an exceptional case on page 490 in his indictment against nurserymen's representatives. In all my dealings with travellers, never have I known an offer of cash made, and never before heard of one being made. That the gentlemen of the road are somewhat of a nuisance at times we are all aware; but alack! like the rest of us, they must live. That the necessary pushfulness attaching to their calling may occasionally, in an individual, degenerate into brazen effrontery scarcely justifies gardeners in branding all comers with the appellation of "Mr. Nuisance." Knowing something of the precarious nature of the livelihood of some of these men, my sympathies have frequently been with them when it has been my duty to say "No, thank you." They may at times hold out that charming inducement to buy, viz., 5 per cent. or 10 per cent. discount; but what of that? Their employers often act very similarly. It is years since I have experienced any annoyance from a traveller's visits. Gardeners should be courteously decided in their answers. I do not believe in the necessity for dodging these gentlemen, and I certainly should think the gardener who would play "hide and seek" with them the greater part of a day was either lacking in decisiveness or had more time to play with than many of us possess. The visits spoken of by your correspondent as being so annoying could at any time be stopped by a note to the firm or firms represented. "Live and let live" we are all ready to cry, and the old adage may well be extended in its application to horticultural travellers.—PROVINCIAL.

The tirade on this worthy section of the world's business men, by one apparently annoyed, is to say the least of it, amusing. Personally I have always enjoyed the visits of our erratic brethren, and whether they booked an order or not, we have always parted the best of friends. Therefore I must strongly protest against the contumely laid at the door of the average horticultural traveller. He is not infrequently one who spent part of his life in gardening, and if not, he is very much in possession of the knowledge of the manner he should conduct himself inside the precincts of a gentleman's policies. I have not, thank goodness, yet come in contact with the specimen who struts like the peacock about the garden quite oblivious to the presence of the head gardener or his employer. No, I must say, those I have enjoyed—and they are not few—were gentlemen who had every regard for the little civilities and courtesies peculiar to a gentleman's establishment. The traveller's duty is to make sales, but the gardener's duty is to buy nothing that he can do without. Both, therefore, in the majority of cases, understand their relative positions, and can enjoy a crack on several topics, and part as good friends as they met. Dear me, what kind of a fellow can he be who runs to hide himself from the traveller? Has he got an impediment in his speech or faculties when he so dreads to meet the voluminous talk of an honest man who solicits your patronage? He certainly must be deficient in moral courage; and let me tell you when such is the case, such a person is not able to conduct a place of any importance. He may launch himself and his employer into a mess at any moment.

You have all heard of "Facing the Music." Well, my exhortation is Face it, then, and you will conquer more than

lying in a damp mushroom cellar for the best part of a day. I came across, in my peregrinations, one or two of the acidulous natured gardener, who has no room in his heart for anything or anyone outside his own selfish ends. In my apprentice days we—both boys—used to have a very much worse traveller to deal with, viz., the book canvasser. I confess I was persuaded once to enter into a big thing for me, then, and didn't I regret it! Nor do I get in the least annoyed now at the most persistent of men whose calling such is. I tell them in the outset, my mind, and strange to say they somehow know that I mean what I say, and there's an end to it. Let us hear your correspondent's version of the other side. He has given us the darkest, I am sure he can also give us a good word, for the hard working travellers.—COMITES.

A Crimson Chrysanthemum.

Herewith I send you a bloom of a new Japanese seedling Chrysanthemum, which is, in my opinion, much the nearest approach to red or crimson of any variety. A strong point in favour of this variety is the manner in which its surface colour is exposed. It is not like so many of the new varieties, half surface and half of the reverse seen at the same time. As you will note, the bloom is large enough for any purpose, and in point of colour it is quite unique.—EDWIN MOLYNEUX.

[Placing the bloom on our desk, so that the light falls fair upon it, the colour is seen to be a very bright crimson, especially toward the centre. The reverse of the florets is pale primrose coloured; and each floret is broad. For colour alone it is decidedly interesting.—Ed.]

Public Halls for Floral Exhibitions.

The assertion in a recent issue of the *Journal* (page 460) as to the prohibitive price charged the Sheffield Chrysanthemum Society for the use of the Cutlers' Hall, would break the back of many societies with less grit than seems to animate the members of that admirable body. Surely a society which, I believe, has consistently assisted the funds of the Gardeners' Royal Benevolent Institution with its surplus revenue in the past, is worthy of more magnanimous local concession than has presumably been meted out to it in the matter of reasonably rented hall accommodation the last three or four years. That a reserve fund should have to be drawn on to meet the seemingly high rent levied by ambitious landlords, seems hardly consistent with the love of flowers, and the advancement in mind and body of the Sheffield artisan (speaking for the amateurs) who seeks, after working hours, the purlieus of greenhouse and garden to relieve the monotony of the sulphurous works of the city: works that are controlled by those capitalists who, I am assured, have not sufficiently grasped the ends and aims of such societies, or else they would use their great influence to divert that power into the balance that would favour the continued success and prosperity of such an old and deserving society as that at Sheffield.—ALBERT F. UPSTONE, Rotherham.

Diseased Potatoes.

As the Potato disease has been so very prevalent this season I am tempted to give a few notes on the behaviour of a few varieties during this, the wettest summer on record. The soil here is a clayey loam, and the subsoil is white clay, consequently it pays best to dig in dry or frosty weather (no time to trench), otherwise the soil runs together, and will not work properly the whole summer if dug just after rain. That grand all-round variety, Up-to-Date, gave by far the best returns, both for its cropping and disease-resisting qualities. Out of sixty bushels we only had half a bushel of diseased tubers, and almost a total absence of "chats," the smallest among them really being good, average-sized seed-tubers. Sir John Llewelyn cropped well, but a large percentage of tubers were diseased, though many did not show traces of disease until being peeled. Syon Prolific did not justify its name this year, for it gave a light crop, and though the tops succumbed early to disease, there was scarcely a diseased tuber found in the whole of fifteen rows. All of the Potato rows were 5½ yds long. Snowdrop, on the other hand, on a similar-sized brake, was fully three-parts bad, and had an enormous quantity of "chats," or small tubers. This variety had the appearance of turning out well, for the haulm, during July and August, looked remarkably well. Sutton's Flourball cropped well, and there were not many diseased. Centenary furnished small, badly-shaped tubers, with a large bulk diseased. Sutton's Ninetyfold fully bore out its name, but a larger quantity of diseased tubers I never saw. We planted 2½ bushels of seed and got barely one bushel of sound tubers in return. The whole of these were used up the first week after lifting, as I shall not grow it again.—A. JEFFERIES, Moor Hall Gardens, Harlow, Essex.

Large Plants of Lorraine Begonia.

I should like to say that I have a very fine batch of Gloire de Lorraine Begonia. I have between two and three dozen plants, and some of them are 4ft through, and 3ft 3in high, each a mass of blooms. I should like to know if this is a record size, as I have been told that the record size was 3ft through and 2ft 6in high.—J. CLUES, Stockgrove, Leighton Buzzard.

Help for Gardeners' Orphans.

A very pretty and successful show was held in the Woodcliffe Hall, Wargrave, on November 18, by members of the Wargrave Gardeners' Association, in aid of the Royal Gardeners' Orphan Fund. Last year was the commencement of a Chrysanthemum show, when all the proceeds were given to the Gardeners' Royal Benevolent Institution, £11 19s. 6d. being taken. This year over £15 was taken, and will be sent to the R.G.O.F. I think too much praise cannot be given to the gardeners of Wargrave and district for the way they have worked to make the show a success. When we consider that there are no prizes or certificates whatever given, it shows the goodwill of all. Many bring plants from a distance, and the employers are pleased to assist also. Surely if a small village like Wargrave can make such a show, other places could, and help our gardening charities, besides giving great pleasure to those who come to see the exhibits, and acting beneficially on the gardeners in the various neighbourhoods. I trust these few lines may wake up other associations to do likewise. I may say that most of the stuff shown came up to show standard.—A PATRIOTIC GARDENER.

The Proposed Gardeners' Association.

Kindly permit me, in reference to the above object, to inform any of your readers interested in the proposed association, to state that, with the consent of the Horticultural Club, a meeting of head gardeners, convened by the recent Gardeners' Dinner Committee, will be held in the clubroom, Hotel Windsor, on Tuesday, December 15, at two p.m., when the subject can be fully considered. Naturally, the creation of an association such as is suggested must depend on the opinions held in relation to it by gardeners generally. If supported only by one or two earnest and enthusiastic men, animated by the very best ideas and desires, whilst the great body of gardeners remain quite apathetic, the proposal must fail. If, on the other hand, the desire to create such an association be general, then its future may be assured. It is most important that those who seek to promote such an organisation should have for its formation sound reasons and practical ideas. If it can be shown that an association of head gardeners can do much to elevate the gardener's status, to promote his social and pecuniary welfare, and not least, to secure for him at the hands of employers greater respect and esteem, then its existence is indeed desirable. It is well worth asking of gardeners generally, whether in all cases they fully realise the importance of their vocation, and try to live up to it? The man who morally and socially elevates himself, materially helps to lift up his vocation. Head gardeners generally are far from being satisfied with the application of so many of their young men to the study of gardening seriously. One of the objects of the proposed association is to endeavour to create, on the part of young men in gardens, higher aims and aspirations, and to be desirous of studying gardening less departmentally and more as a whole; also acquiring, so far as may be practicable, such theoretical knowledge both on practice and on science, as shall help to render these youths more able and efficient gardeners than their present lack of study creates.

It will be asked, Are not gardeners now a highly intelligent class? To a certain extent it is quite true, and it is doubtful whether any vocation could have presented a more intelligent body of workers than was gathered at the Holborn Restaurant last Michaelmas day. But there is general admission that all is not so well as is desirable. Probably there are too many gardeners. Where hundreds literally fall over each other in the scramble for a situation, is it not fair to assume that too many of these are garden failures? To restrict the output, yet greatly increase its quality, may be in the end a great blessing to gardening.—ALEX. DEAN.

The aspirations of "Hampshire," page 490, are doubtless highly creditable. If by means of an association the position of gardeners can be raised to a higher level, then by all that is best in gardening, let us have one. Many of us, though willing enough under rightful conditions to remain gardeners to the end, are asking, How can we win upward out of the profession rather than in it? An association might provide tests, and might be able to show that its members possessed the necessary qualifications for taking high positions, but it does not follow as an inevitable corollary that employers would take such men, or

seriously consider their merit papers. Such an association with the objects mentioned by "Hampshire," would need to be the outcome of the joint efforts of gardeners and their employers.—COUNTRYMAN.

Allow me through the Journal to place a question before its numerous readers with regard to the formation of a gardeners' association, in which my chief and myself are in hearty sympathy. We do earnestly hope that its inauguration may form one of the principal events of the new year. Considering, then, that the association is to be formed for the purpose of elevating the whole body of gardeners, would it not be a feature to allow foremen to become members also, provided they possessed the necessary qualifications, which will, in all probability, be required by such association? I presume that younger members of the profession (journeymen) will not become members, as they must, in my opinion, be foremen to become eligible for membership, and the association would be doing good in assisting them to qualify for head places. Further, any head gardener knows the value of having a good foreman under him, who is well up in all subjects: almost as well as himself. I trust this will meet the eye of some one having considerable influence, and who, being of the same mind, will bring it up when a meeting of the chiefs is called to consider the gardeners' association.—"SCOT."

Show Boards at Exhibitions.

There seems to be a danger in front, and this lies in the total abolition of the show board for Chrysanthemums and other flowers. We learn that both Edinburgh and Hull have held exhibitions this year at which no show boards were to be seen. So long as a society can offer huge prizes which will cover the increased expenses that will be necessary in order to take long-stalked flowers considerable distances, no harm can come of the change to these prosperous and wealthy societies. But if vases become universal it would appear that exhibitors must confine their efforts to more restricted areas. This of itself would be like dealing the death-blow to that broad, deep interest in the cultivation of this beautiful and useful plant. Besides, there's a sentiment of respect left, surely, for the old boards and their glorious burdens? They add variety, though the vase-arrangements are the lovelier in effect. I plead for a few show boards still.—J. D.

Cypripedium × Godefroyæ's parentage.

In last week's issue of the Journal, page 483, I read with interest a note on Cypripedium Godefroyæ and the variety leucochilum. It is there stated that Cypripedium Godefroyæ is a natural hybrid from Siam, the parents being C. niveum × C. bellatulum. I have just flowered the cross mentioned, which differs entirely from Godefroyæ or its variety. A note upon this subject may be found in this month's issue of "The Orchid Review," page 350. It is stated there that this cross will not produce C. Godefroyæ, and so far I believe this statement to be correct. The niveum and bellatulum cross with us has small cinnamon spots on the lips and segments, instead of the large dark purple spots of Godefroyæ. The flower is identical with the latter in shape, but smaller, and the foliage is much larger than Godefroyæ.—W. P., Chardwar.

The letter in "The Orchid Review" for November is as follows:—"An interesting and beautiful series of six photographs is sent by Mr. G. Walker, gardener to H. Druce, Esq., of St. John's Wood. Mr. Walker calls attention to the account of Cypripedium × Godefroyæ which appeared in these pages (v. p. 75 and vi. p. 231), in which the conclusion was arrived at that this plant was probably a natural hybrid, and remarks: 'I should say that it is a species, for I have crossed C. niveum with C. bellatulum, producing C. × Mrs. H. Druce, and C. concolor with C. bellatulum, producing C. × Walkerianum, and both of them are distinct in foliage and flower from C. Godefroyæ, and much stronger in growth. These crosses will not produce C. Godefroyæ, and I send you photographs of the two hybrids with their parents, together with C. Godefroyæ leucochilum, that you may see the differences for yourself.'" The Editor of the Review also says: "The question referred to by Mr. Walker is a very interesting but difficult one, and it is quite easy to follow his argument with the beautiful series of photographs sent, but there are other hybrids in existence which, unfortunately, are not available for comparison. And the question of the origin of C. Godefroyæ, and its relation to C. Godefroyæ leucochilum, and to the species mentioned, was never thoroughly cleared up, as may be seen by reference to the articles cited. Nor has any further information come to hand as to how far the species grow together or separately. Neither of Mr. Walker's hybrids are identical with C. Godefroyæ leucochilum, which itself differs from the original C. Godefroyæ. The hybrid between C. bellatulum and C. concolor which was identified with C. Godefroyæ, we have not seen. We should be glad of further information on the different points raised."



* * For the dates of some of next year's fixtures, see back pages of this issue.

Executive Committee of the N.C.S.

The usual monthly meeting of the executive committee was held at Carr's Restaurant on the 23rd inst. The minutes of the last meeting having been read, the secretary announced the death of Mr. A. Neevell, an old member of the society, and the committee; and also of Mr. E. J. Bentley, of Ramsgate, a fellow of the society, and an annual subscriber to the reserve fund. It was reported that Miss Austey, of Norwood, who was awarded one of the Waterer Challenge Cups in the amateurs' division on November 10, had voluntarily resigned the cup on the ground that she found on the publication of the report of the show that she was not qualified to exhibit as an amateur. The secretary bore testimony to the candid and honourable manner in which Miss Austey had acted in at once taking a journey to Ealing to announce her disqualification, and expressing her regret for the error she had unwittingly committed.

A report was brought up from the finance sub-committee recommending that the cup be awarded to Mrs. Crane, who was placed second, and in consideration of Miss Austey's ingenuous action in the matter, a small silver medal be awarded to her exhibit. The secretary stated that the amount of prize money awarded at the November show was £188 5s. 6d. Medals £29 17s. 6d., making a total of £218 3s. He also made what was considered to be a very satisfactory report as to the society's financial position.

Mr. C. H. Payne and Messrs. Bevan and Witty made interesting statements as to their visit to the recent exhibition of the French National Chrysanthemum Society, a dictated report of which will appear in the next annual report. It was resolved that the date of the great show in November, 1904, should be November 2, 3, and 4, probably at the Crystal Palace. It was further resolved that meetings of the floral committee should be held at the Essex Hall on September 19, October 24, and November 21, the arrangements there being highly satisfactory. The floral committee will also meet on each of the show days, which may be arranged.

The schedule of prizes for November, 1904, was referred to the schedule revision sub-committee, and it was resolved that the floral committee be invited to dine as usual. Under the head of miscellaneous business, some criticism was delivered on the new catalogue, and the matter was referred to the classification committee for the consideration of revised lists to appear in the next report. A vote of thanks was passed to the chairman for presiding.—R. D.

Propagating.

Excellent cuttings may usually be obtained from a large number of varieties about the present time, so they should be inserted now, rather than deferring the operation until later, if the cuttings are at all likely to become drawn and spoiled. Late flowering varieties, as a rule, may be propagated first. Those that flower at the ordinary time or midseason should follow, while it is quite early enough for October and early-flowering varieties if they are propagated from January to March, if done in pots under glass. Most of the latter may, however, be successfully rooted in cold frames, where they will grow dwarf and sturdily, making excellent plants to transfer directly to their flowering positions in March or April.

In selecting cuttings, it is best to secure those of sucker origin well away from the stems. Some varieties are very backward in producing these desirable cuttings, while others produce them too freely, necessitating thinning out the growths. The proper length for cuttings is three or four inches long, with a clean, firm, green stem. There is no advantage in selecting suckers with roots attached. They have a hard, woody stem from the beginning, and do not grow so freely as might be imagined. Shorten them to a joint, cutting the stem square across below it, and remove the bottom leaves.

Pots for the cuttings should be washed clean and dried. Single cuttings will require a 2½ in size, and if several are to be placed round the edges of a pot 3 in pots are suitable. Drainage should consist of a large piece to cover the hole, with some smaller over, covering with a little moss or fibre. Prepare the compost with two parts loam broken up finely, adding one part of sweet leaf soil rubbed through a ½ in riddle. Add plenty of sand in the compost, and also place a layer on the surface, pre-

ferably dry, so that some of it may run down the hole when making it with the blunt stick to receive the cutting. When inserting the cutting see that the base of it rests firmly at the bottom of the hole. Press the cutting firmly in its whole length by gentle pressure with the stick. Stand the pots level, and give a good watering, also carefully labelling the variety.

The next point should be the position of the cuttings. A frame having a moveable light is the best. Stand it on a stage not far from the glass in a greenhouse. The bottom of the interior may be fine ashes, which are sweet, clean, and retain moisture, and allow superfluous moisture to readily drain away. The light, or, failing that, panes of glass, must be laid over, and as every morning much water will be condensed on the inside, this must be wiped off, or the cuttings will soon damp.

A heat greater than 50 deg should not be allowed by artificial means, as it will weaken the cuttings. The aim must be to keep the cuttings fresh, then they will soon root. With careful management water should not be needed until the cuttings begin to root. If any pots show signs of becoming dry, bring them out of the frame to water, and place back again when drained. Any cuttings which may damp off remove immediately. On the first indications that rooting is commencing more air must be allowed, daily increasing it until the plants can bear full exposure.—E. D. S.

The New Chrysanthemum, Brightness.

The variety Brightness (syn. J. H. Silsbury) mentioned by Mr. Molyneux on page 484, which was shown at Plymouth under the name Brightness, will, no doubt, prove a great acquisition. I should like to draw the attention of your readers to the fact that this same variety was certificated by the Floral Committee of the N.C.S. at the November meeting at the Crystal Palace this year, under the name of the raiser's brother, J. H. Silsbury. It is one of the select varieties raised by Mr. Martin Silsbury, Shanklin, I.W., and it is interesting to note that it came from the same head of seed as produced Mrs. F. W. Vallis, another sterling variety that has been well shown this year; at Edinburgh and South Shields amongst other places.—C. ORCHARD, Bembridge, Isle of Wight.

At Billingbear Park, Wokingham, Berks.

Recently I paid a visit to Mr. F. Ashman, the well-known gardener at Billingbear Park, when his collection of Chrysanthemums were at their best. They were arranged in banks in the large span-roofed fruit houses, and were a sight worth seeing. Sturdy, well-grown plants with ripened wood and heavy foliage, all were of the highest quality possible. Two varieties in particular were very excellent, viz., W. R. Church and F. S. Vallis. Mr. Ashman has taken first for eighteen Japs at Ascot, first for twenty-four at Reading, and also at Wokingham this year, and he has been equally successful with fruit. One special feature to be seen at present is a large house filled with the popular Begonia Gloire de Lorraine, which are some of the finest specimens in small pots that I have seen.—J. B., Berks.

The School of Handicraft's Garden, Chertsey.

The "Surrey Herald" says:—"A magnificent collection of these charming and popular flowers has been on view at the School of Handicrafts. The plants are massed in one of the houses and the effect is most striking, a wide range of varieties, all brought to a high pitch of perfection, being exhibited. Great credit is due to Mr. A. J. Brown, the director of the school's farm and garden, not forgetting the intelligent help of James, one of the boys. Most noticeable among the varieties is Madame Rogers, a curious green incurved bloom; Charwood, a fine lemon Japanese; Phœbus, a deep sun-yellow Japanese; Miss Cissie, a charming single bronze-red flower; African Hero, a stately bronze-red incurved; Millicent Richardson, deep mauve; Source d'Or, a beautiful golden Japanese, and many others. In an adjoining house there is a fine crop of ripe Tomatoes, the quality and condition of which it would be difficult to match."

The Collection at Royal Kew.

From a botanist's point of view, the Golden Flower may not be attractive, but anyone visiting Kew on a fine Sunday afternoon and seeing the crowds flocking to No. 4 (the greenhouse) and also to the Temperate House, can soon tell what is the most popular flower at present with the general public. The aim in No. 4 is not to grow gigantic blooms alone, but to show the value of the Chrysanthemum as a decorative plant. Naturally grown plants, not disbudded, and others (and these are in the majority) partially disbudded, are excellent from a decorative point of view. Large blooms, however, are not neglected. All sections are represented, and the few we noted were, of singles: Victoria, Emily Wells (lovely shade of pink), Ladysmith, and Earlswood Beauty. Among pompons: Snowdrop (the plants covered with white button-like flowers). Anemone and Japanese Anemones: W. G. Drover and Sir Walter Raleigh. Incurved: Madame Ferlat, William Higgs, C. H. Curtis, Madame E. Roger (a great favourite with visitors), and Mdle. Marie Liger.

The Japanese and Japanese incurved give a splendid account of

themselves, the best being Gny Hamilton, J. R. Upton, Madame R. Cadbury (carrying huge, ivory-white flowers), M. Chenon de Léché, H. J. Jones, Mrs. Barkley, Mrs. H. Weeks, Countess of Harrowby (a lovely shade of pink), Mr. T. Carrington, Mrs. George Mileham, and Mrs. Greenfield.

The oldest decorative varieties, Tokio and Source d'Or, are as great favourites at Kew as elsewhere, and very effective are the small plants in 5in and 6in pots, dotted amongst the usual groups on the side stages, one variety being usually restricted to one group, and these include Snowdrop, Phœbus, Crimson Gem, Source d'Or, with others.

The majority of the plants in the Temperate House are arranged in the two octagons, and are chiefly of the Japanese and Japanese-incurred types. The plants on the whole are larger than in No. 4, and more disbudding has been done, while several are carrying very large flowers. Among them may be noted Nellie Pockett, Jumbo, Cecil Wray, Henry Barnes, and Miss Alice Byron.

A Liverpool Collection.

The collection in the Liverpool Botanic Garden amounts to 1,400 plants, and these are grouped for effect. Eight hundred of these consist of large Japanese and incurred, which are quite up to the exhibition standard in quality, and represent all the leading varieties. What strikes us most on entering the house is the manner in which they are arranged, and here Mr. Guttridge (the curator) has struck out of the orthodox style, and has created a far more pleasing effect by introducing dot plants throughout the centre bed, thereby avoiding what would otherwise become monotonous. On the side stages of the same house is a fine display of single varieties. These prove attractive when the large blooms are on the wane. In the "large greenhouse" is to be seen a representative collection of pompons and decorative sorts, which are a magnificent show in themselves.—S.

English Flowers in America.

A year ago Mr. W. Wells, of Wells and Co., Ltd., Earlswood, Redhill, Surrey, sent three dozen specimen flowers for non-competitive exhibition at the show of N.C.S. of America, held at New York. The blooms had been packed with great care, and the exhibit, when staged, was pronounced to be remarkably successful, and was greatly admired. From a commercial point of view, Mr. Wells did one of the finest strokes of business he is ever likely to do, and more than a dozen of his novelties are in the front rank as exhibition varieties in the United States of America.

Mr. Wells has received a letter from a correspondent resident in New Jersey, and this letter is as follows: "I beg to congratulate you upon the excellence of the blooms you exhibited at New York Show [in November, this year.—Ed.]. All of them were very fine, and in some cases there was not a petal bruised, which goes to show the excellence of the keeping qualities and the careful packing, as the flowers must have been packed at least eleven days. You were awarded a diploma, which was well merited. In the Society or sweepstake prize, some wonderful flowers were shown, and out of twenty fine varieties no less than eleven were novelties sent out by you. Mention might be made of Leilia Filkins, Donald McLeod, F. A. Cobbold, Wm. Duckham, Gen. Hutton, Maynell, S. T. Wright, Ben Wells, W. R. Church, Mary Inglis, and Cheltoni."

Another letter from a correspondent mentions the fact that the variety W. Duckham won the American National Chrysanthemum Society's silver cup. The exhibitor had ten blooms of this variety, and speaks of them as being "Simply marvellous; everybody was staggered. My flowers were pronounced by everyone to be the finest ever seen here."

Novelties and Varieties.

Gesnera exoniensis.

This forms a handsome foliage plant, and at the same time is one of the most brilliant of all flowering subjects. It is most excellent for furnishing the intermediate, or stove houses, during the next few months, and although it requires no special attention to secure good specimens, it is seldom seen at perfection. For flowering during the winter good-sized corms should be inserted singly in well-drained 4in pots in a compost consisting of two parts rich fibrous loam, and one each of peat and sand, about the first week in July, having the top of the corm just under the soil. These should be placed near the glass in a heated pit, or similar structure, in a temperature of about 60deg Fahr. by night, allowing it to rise to 70deg Fahr. during the day by the aid of sun heat. If the soil is in a fairly moist condition at the time of potting, water will not be needed for a day or so, and until the corms commence to root and grow freely water should be given sparingly. Encourage them as much as possible when well

started by keeping a nice, moist, growing atmosphere, and also shade during the day from bright sunshine.

When in a fit state for potting they should be transferred to 6in or 7in pots according to size, using a similar compost to the one advised before, but rather coarser and not quite so sandy; but before doing so they will each need to be tied to a well-pointed short stick to prevent their snapping off just on a level with the soil, which they are very apt to do from the weight of their leaves. After potting, the plants should be returned to their former position, and kept rather closer for a few days, and watered carefully until they root into the fresh soil, after which they can be treated as before stated. When, later on, they show signs of flowering, they can be fed a little if the pots are well filled with roots, on weak liquid cowdung manure; but this should be given sparingly.

At the close of winter, when they begin to die over, water should be gradually withheld and the plants removed to a cooler



Crowea saligna major.

and drier atmosphere, and when properly dried off stored away in a dry place until started again. *G. zebrina* is another equally handsome but rather weaker-growing species, which answers to the same culture. Its orange-scarlet flowers and mottled foliage form a striking contrast when grown with *G. exoniensis*.—E. B., South Berks.

Crowea saligna major.

The Croweas are less grown nowadays than formerly. They are allied to *Boronia*, and require much the same treatment. The one here figured was seen in Messrs. Veitch's nursery at Chelsea a week ago, when the pretty purplish-rose flowers attracted much admiration. We may remark that Messrs. Veitch also possess a splendid stock of *Gesnera exoniensis*, which they have recently been exhibiting a good deal.



Bedding Rose, Cerallina.

Already this fine decorative Rose has found its place, which is in the front rank of good garden varieties. It was a pleasure to see bunches of it staged by a Norfolk firm at the Crystal Palace Chrysanthemum Show recently. The variety was sent out by Wm. Paul and Son in 1899. It is a splendid free-flowering autumnal, the flowers of fine shape and good substance, and coloured rosy red—one cannot say rosy crimson at this season; though a dry autumn would most likely increase the crimson in the petals. At all events, no one can do wrong in adding this dwarf newcomer to a collection of decorative Roses.—JOHN AVENEL.

Crimson Ramblers for Easter.

The two-year-old plants of Crimson Rambler (observes the "American Florist") will soon arrive from the nurseries, and should be potted in heavy clay soil as soon as received. If the canes are six or seven feet long, shorten them back to three or four feet. These canes can be twisted and bent into any desired shape: they should never be left straight or the breaks will be uneven. Start them in a cool house, as near to 40deg as possible, until about twelve weeks before they are wanted in bloom, when the temperature can be gradually increased each week until 55deg at night is reached, which will bring them into flower nicely for Easter (April). Success in forcing Ramblers for Easter depends largely upon the way they are handled now. Start them gradually, water sparingly as long as there is little root action, gradually increasing the water supply as the temperature is raised and growth commences.

Roses in America.

Like "W. R. Raillem," I have not been in America myself, but through various channels I glean a little respecting American horticulture. A friend of mine who owns a large nursery in Hants, spent some of his time in the States, and when he informed me that they grew their Roses under such a system I, like your able rosarian, was surprised. But Americans are ever after quick returns, and the methods of Carnation culture and Chrysanthemum culture for market are equally surprising. We growers would be shocked to see Mums planted direct into huge houses from the cutting bench, and kept there throughout the season. Yet they get the finest of blooms, which fetch from a quarter to a whole dollar apiece. Respecting the Roses, how could they sell 4in or 6in plants of such as Papa Gontier, Etoile de Lyon, Marion Dingee, Marie Guillot, Sunset, Rainbow, La France, Metcor, Madame Abel Chatenay, Maman Cochet, &c., at prices from three to twenty cents apiece were it not for some method of lightning culture? and that method is heat-struck cuttings. If Roses budded on the Manetti are desired one cannot get them under forty or fifty cents each. Naturally the latter give the quickest returns to the amateur, but very few are sold compared with the cutting plants, which, if allowed to do so, generally flower the same season. Some three years ago I had one of these tiny wisp-like plants sent me, the variety being American raised, named Champion of the World. I potted it, and it flowered in the house within three months. Allowing it to do so undoubtedly checked it, for not until this season has it exhibited the trait claimed—champion in growth and other points. However, the wood is not stout enough to bear good flowers, but next season, after hard cutting back, should prove it thoroughly. Apparently the flowers resemble La France somewhat, but it is a Tea, and said to be absolutely mildew-proof. Some strange points about it are its freedom from green fly and maggot, its pale foliage, which is shiny, and reminds one of a Wichuraiana. To hark back to market men, only a few varieties are cultivated, not more than a dozen or fifteen at the outside.—A. W.

ROSE, MADAME ANTOIN MARÈ.

This Rose was raised, I think, by M. Marè, of Nice, who kept the stock for some years, but eventually consigned it to Jupeau (?) of Paris, from whom Mr. Arthur Paul, of Wm. Paul and Son, Waltham Cross, secured plants. The variety is a free grower, and was certificated in September, 1902.

ROSES, OLD AND NEW.—Mr. J. T. Strange, Aldermaston, gave an admirable lecture on "Roses, old and new" recently at Theale. He traced the history and development of the Rose from the old Cabbage, Damask, and Sweet Briar to the many beautiful kinds of the present day, gave an account of the first raising of Hybrid Teas, and referred to some of the foremost Roses grown from "sports."

Adaptation in a Pelargonium

The illustration on the next page is interesting as an example of a double flower reverting to the single form. Of course, we have not here any sexual influence, only a morphological difference. Reversion in hybrids and crosses is hardly yet definable, although observers are fast building up theories; but where purely morphological differences evince themselves, we can trace the cause almost invariably to new conditions of culture, in garden plants, or fresh surroundings, if in Nature. This is called adaptation. Double flowers all arise from single flowers, by the transformation of stamens and pistils into petals. This cannot be traced in every instance where double flowers exist, but it can in tuberous Begonias, Water Lilies, Dahlias, and many others. In the Pelargonium here noticed, it appears that the stamens and pistil have developed perfectly, thus making the "single" flower; while in the inflorescence of the one first produced, the mal-formed or double flower was formed. The photograph came from Mr. Tyler, Halstead, Essex.

Floral Decorations.

REALISM IN FLORAL DESIGNS.

"The Florists' Exchange" figures a panel representative of General Grant on horseback. The frame used was a panel 5ft by 6ft, and was first covered completely with green moss, then the figures were worked out with Immortelles of the proper colours, 100 bunches of these being required for the purpose. As a finish to the formal design, the natural flowers had been exceedingly well placed. There was a cluster of Lilies at the lower left-hand corner, and a cluster of American Beauty Roses at the upper right-hand corner. The artist had known just how large to make those clusters to provide a setting for the picture without overshadowing the features of either the rider or the horse. It is not always possible to get live green moss, and in the absence of that material one would have to use the ordinary sphagnum moss instead. It would then be necessary to use green Galax, or Ivy, leaves as a covering for the moss in forming the background for the picture, though the leaves need not be placed until the figures had been worked out with the Immortelles. Around the edges of the panel, leaves that have been stemmed two or three together should be put in and left so as to stand a few inches away from the edge, thus making a suitable frame for the picture.

Another unique design that came to our notice recently was one furnished by Timothy F. Creedon, florist, at Middleboro', Mass. This was a representation of a child's cart, and was sent by sympathising friends to the funeral of a little girl whose chief pastime had been the wheeling of her little cart. A small cart, standing about 2ft high, was used as a frame; the back, sides, and foot rest were filled in with white flowers and the seat with pink. The arm rests were composed of Admiral Cervera Carnations, bordered with small pink Chrysanthemums, and Roses were used plentifully, both in the body of the carriage and on the arm-rests. The fact of our writing about realism in floral designs will not, we hope, lead to the belief that we are an advocate of that class of work for funeral occasions. At patriotic celebrations or political gatherings one can with propriety give full scope to his artistic ability, and make any design or figure that is called for; but for funeral purposes we think they are out of place.

SIMPLE DINNER-TABLE DECORATION.

For the centrepiece a common wicker plaque is the most desirable to use. This is first filled with damp moss, then the moss is tied in place with green thread. After the mossing is completed, Adiantum or some other suitable Fern, is stemmed and used to cover the basket, hiding the moss completely, and also leaving sprays to hang well down over the edge of the plaque. The Roses are then put in position, and to have them so that they will stay firm in the moss, it is best to wire them on to the regular flower sticks. When arranging the Roses, they should never be left high enough to obstruct the view of those who are sitting at the table. Many otherwise pretty table decorations have been spoiled by the centrepiece being too high. Low effects are always the most desirable on a round or oval table, and the smaller the table the less towering should the arrangement of flowers be. From the centrepiece to within about 20in of the edge of the table, sprays of Ferns may be laid here and there. A few Roses can be placed among the Ferns to advantage, though Roses here are not an absolute necessity. We have seen fronds of Nephrolepis used in the space between the glasses and the centrepiece with pleasing effect, and that without having any flowers intermixed with them. The favours for the guests must not be forgotten; they may be Gardenias, Carnations, Roses, or Cattleyas. This mode of arrangement of a table setting can be varied at will. Carnations and Asparagus may be used in place of Roses and Ferns, or Cattleyas and Adiantum Farleyense can be substituted. This would be much more expensive.

Gadding and Gathering.

A School of Gardening.

Combining business with pleasure, at the time of a brief holiday in August last I visited the newly-opened Women's School of Gardening at Corstorphine Hill, near Edinburgh. The Journal has had prior notices of this school, and has already mentioned the fact that two ladies who manage the institution, the Misses Barker and Morison, graduated at Swanley Horticultural College, Kent, thence they had a somewhat varied experience in professional gardening and the laying out of places ere they eventually found anchor, for a time at least, on the coast at Musselburgh. (In using the word anchor I shouldn't have introduced the coast, should I?) And here with apiculture and horticulture their twin experiences were broadened, and of course experience

has generally to be paid for. For more reasons than one it was determined to remove the school out west, Musselburgh being east, of Edinburgh. The present location can be seen by anyone journeying by train from Edinburgh toward the Forth Bridge, or Glasgow, as it lies facing the sun, on a flank of Corstorphine Hill. A little more shelter on the west, which is the direction of the prevailing winds in that neighbourhood, would certainly have been an advantage; but, all things considered, there are good gardening prospects here. One magnificent advantage possessed is the level, almost straight road right into the Waverley Market and the large West End shops in the Scottish metropolis. At Musselburgh, that had not been so. And while the products of the garden can be more easily sent into town, natural manures and other necessities for the crops can be as easily fetched out. The district is noted for nurseries and gardens of all sorts. As the two ladies have a number, and an increasing number, of girl and young women students, some of which journey back and fro from the city. It is here, again, advantageous to be so get-at-able. Cable tram-cars run out nearly the full way—a distance of two and a half miles.

The garden is about two and a half acres in extent, and has already been planted with suitable selections of fruiting trees and shrubs. One or two glass houses have also been erected, and these contained Tomatoes and Cucumbers, other plants occupying them in season. Soon there will be additions to the plant structures. The soil is of a rather stiff nature, but produces good vegetable and flower crops.

This is the only school of its kind in Scotland, and was formally opened by the Countess of Aberdeen, supported by a large company of ladies and gentlemen, some short time ago. A prominent feature of the gardens is the apiary in which the school prides itself, and it is understood that the place gives promise of being a bee-keeper's paradise. The students take part in demonstrations which are given by experts in bee-keeping and floral decoration, such as bouquet-making, table decoration, and wreaths. A certain amount of theoretical instruction is necessary, and in order to obtain this the students attend science classes at the Heriot-Watt College. This does not mean extra expense to the student, as it is included in the curriculum. Students are prepared for the Royal Horticultural Society's examinations, and a diploma is granted to students who have

passed satisfactorily, examinations in theoretical and practical horticulture, botany, agricultural chemistry, and book-keeping. Mr. John W. McHattie, the city parks and gardens superintendent, is the examiner in practical horticulture. The principals of the school have been encouraged by the number of students enrolled and by the number of applications for women gardeners which have already been received. At present there are five resident students, and a number of students come from the city. Two of the resident students are from England, two from Glasgow, and one from Saltcoats. The period of study for those who intend to follow gardening as a profession extends over two years. The fees for resident students are £70 a year, and for non-resident students £25 a year. Thus the average girl is prohibited through lack of means from taking to gardening as a profession. "What is needed (says an Edinburgh paper) is that some patron of education should found a number of scholarships for women gardeners.

The support of such a scheme might well come within the scope of the Carnegie trust at Dunfermline, and it might also receive the attention of such educational bodies as the Heriot Trust."

Notwithstanding what "Rosa Dartle" said against the lady gardener (and in a ladies' paper, forsooth!) a week or two ago, I wish the school success, for gardening is as healthful for the ladies as for "gentlemen."

The Greenhouse, Kew.

The following is a list of plants in flower in the Royal Gardens, Kew: Begonias: Agatha, Gloire de Lorraine, Mrs. Leopold Rothschild, and Turnford Hall. Carnations: Triumphans, Snowflake, Mrs. Leopold Rothschild. Bouvardias in variety, including the new King of Scarlets, with large flowers, but lacking the brilliant colour of President Cleveland. Epacrises, splendidly budded, will be a sight in a week or two's time. Ericas, hyemalis and its var. alba., despite the wet and unfavourable summer for ripening wood, are covered with flowers; also E. melanthera. Peristrophe speciosa, effectively relieved with dot plants of Abutilon Savitzi. Salvia splendens, under several varietal names: grandiflora, Triumph, Glory of Stuttgart, præcox, and miniata. The two latter are dwarf forms, much alike. Calceolaria Burbidgei, flowers yellow. Zonal Pelargoniums, red colour, very effective at this time of year. Paul Campbell

seems equally as good for winter flowering as for summer bedding. Reinwardtia trigyna and R. tetragyna. Primula obconica, well grown plants covered with flower, but scarcely as bright in colour as we have seen in this house. Chrysanthemum (or Marguerite) Brousonetti, white, and Etoile d'Or, yellow. Jacobinia chrysostephana, J. coccinea, and J. Ghiesbrihtiana.—WANDERING WILLIE.



Double-flowered Pelargonium reverting to Single.

USEFUL HINTS.—Lime water is the best worm exterminator for pots or benches. A 6in pot of lime to 12gals of water. Let the lime settle before using, and there should be a few days' interval between applications of lime water and liquid manure. * * If you experience difficulty in rooting some kinds of stock in sand, try hard coal ashes which have been passed through a half-inch screen. * * Katherine Tracy is a good soft pink Sweet Pea for winter cutting.



Profitable Varieties of Bush Apples.

Of all the forms in which Apples are grown, this is the most profitable, as well as the easiest to manage. Yet there is a right way and a wrong way of treating them, as one is often reminded when looking at other people's gardens. Some are anxious to get as many branches as possible, and let the tree become congested, with the result that the fruit-spurs in the centre of the tree die away, which is all the greater pity, as it is there that a good quantity of fruit can hang without weighing down the branches, or giving the wind a chance to knock it off.

Others, in their anxiety to get a large tree as soon as possible, either do not shorten the branches or shoots at planting, with the result that in the future there are long bare branches devoid of fruit-spurs; or else, having done this at planting, they avoid shortening the first year's growth, with the result that the buds do not break out in the spring all along the previous season's growth, and consequently a given branch does not bear so much fruit. In addition, the branch, being without foliage along some part of its length, does not thicken so rapidly, and consequently is not able to support so great a weight of fruit. This impatience defeats its own ends. Others overdo their trees with kindness, and feed them up before they have fruited, either by putting manure with the soil at planting, or by giving them liquid manure, either of which practices induces a rank, sappy growth which is not conducive to fruitfulness, and the unripened, sappy wood may be cut back in a severe winter. Others again keep newly-planted trees well watered, or rather, badly watered, and the result is the same as by manuring. If a good mulch of long manure is put over the ground occupied by the roots of newly-planted trees they will never need watering in any normal summer, and, in fact, are much best without it, as the growth is so much better ripened.

But as I have dealt with the training and pruning of bush Apples in another article, I will confine myself to a chat about a few of the most prolific bushes. One is always tempted to try new Apples about which a fuss is made, but it is very risky, as we do not know their constitution at all, and it is wiser to let other people experiment with them on different soils first.

There are so many good sorts of Apples to be got which are of well-proved merit, alike as to quality, fruitfulness, hardiness, and freedom of growth, and we may as well confine ourselves to these until we see how some of these new ones turn out. That much-advertised Apple, Bramley's Seedling, was the occasion of the remark of a fruit grower to me the other day that it was the most over-rated Apple he knew. Few probably would go as far as this. Many Apples that are very much boomed turn out to be quite inferior to many existing varieties of the same season. Of the Apples introduced during the last thirty years, it is doubtful if there are half a dozen which, if we take into account all the traits necessary to a good Apple, are any improvement upon some of the best in existence before that time.

I have Cox's Orange Pippin, Lane's Prince Albert, Mannington's Pearmain, Warner's King, Adam's Pearmain, Warwickshire Pippin, and Wellington, not to mention many others in existence thirty or forty years ago—have these been improved upon for all-round excellence? It will surprise some to hear that all of these were grown thirty or forty years ago, as it is only during the last twenty years that some of them have become well known. Some, like numbers of the great people in the art and literary worlds, have been "discovered." Many of the newer Apples, especially the American varieties, are tender, and either do not succeed in a cold wet soil, or are especially subject to canker and woolly aphis, or are slow in coming into bearing, or only develop their best qualities under very favourable conditions.

The sorts I am going to discuss are not necessarily all of the very front rank as regards quality, but they are all very good and all hardy, of healthy growth, and free in bearing, which four qualifications all, except those few gardeners who have ideal conditions for fruit growing, may be contented to accept without expecting anything more. All should be on the Paradise stock unless otherwise stated.

SCARLET NONPAREIL.

The first to be mentioned, not because it is the best, is the Scarlet Nonpareil. The origin of this Apple is doubtful, some saying it was found growing in a garden, and others that it was deliberately raised from seed. It is rather below the medium size unless under very good conditions and well thinned, and is of such a beautiful glowing colour that it is very often on the exhibition table. It is a medium grower, making very slender shoots, which

rather unfits it for the standard form. It is very tender and of good flavour, and is very acceptable for dessert at Christmas, being one of the handsomest in season at that time. The Royal Horticultural Society include this in their very short list of dessert Apples in their pamphlet on fruits for cottagers and owners of small gardens.

STURMER PIPPIN

is perhaps the latest dessert Apple, being good sometimes as late as June if allowed to hang on the tree well into November, and then carefully stored. There is not much risk in letting them hang so late, as a few degrees of frost do not harm Apples on the tree, and when there is a chance of a sharp frost, and we do not often get more than two or three before the middle of November, a covering can easily be thrown over a bush tree, especially if, as always should be the case, the extension shoots have been shortened before that time. It is of excellent quality, but needs peeling, though many do that with all Apples. It is of medium size, russety, and quite a contrast to the preceding in the matter of beauty, though getting a little colour in a favourable autumn. It is of moderate growth, seldom forming a large bush, and a very regular bearer. It will stand, and, in fact, needs fairly generous treatment, as there is little fear of its running too much to wood. It was raised at Sturmer, Haverhill, near the Essex-Suffolk border, and was obtained by impregnating Ribston Pippin with the Old Nonpareil. Both parents are prone to canker, the former especially so, but the descendant does not seem to have inherited the tendency as far as my experience goes, though it has inherited the Ribston flavour.

WARWICKSHIRE OR WYKEN PIPPIN.

An Apple which is not planted now so much as it deserves to be is the old Warwickshire Pippin, or Wyken Pippin, as it is often called from the name of the place near Coventry where it was raised some time in the eighteenth century. As grown on standards, which are very common in old-fashioned orchards and cottage gardens, where large old trees may often be seen a mass of yellow fruit, the Apple is rather below medium size, but grown on dwarf trees with good culture it is fully up to the medium size, and a rather handsome golden Apple, crisp, juicy, and of very fine flavour. It is of rather small upright growth and very prolific. It is in season at Christmas and for a couple of months afterwards.—A. PETTS.

(To be continued.)

Winter Tomatoes.

A word or two on this subject will not be out of place at this season. We have here just now a small three-quarter span house, in full bearing, and it is a sight worth seeing. The plants have six and seven bunches, with four and five nice-sized fruits to a plant. My method of growing is sow the seed in May in 6in or 7in pots; plunge them in either a Melon or Cucumber pit. When the seedlings show themselves move them to a cold pit or frame until they are in their "rough leaf" state, when they will be ready for pricking-out in boxes, still keeping them cool. When they have made nice, sturdy plants 4in to 6in high, pot them straight into fruiting pots (we use 12in), using well-chopped loam, with a 6in potful of dissolved bones as the only manure. Put them back in cold pits, having stakes ready across the pit. Care must be exercised in bending plants, as the sun draws them and they sometimes snap, being so brittle. By the end of August they have set three or four nice bunches of fruit. Now take them to their winter quarters, which should be kept moderately dry and warm, say 65deg F. at night. Plenty of air on mild days is advisable, with the use of a camel's-hair brush to aid in setting their fruits. They will ripen right up to March. Where a large kitchen, with a chef, has to be supplied, they are found most useful all the winter, being much better than the shelf-ripened fruits, or those that are bought, especially for salads. The variety I find to do best is Camerons No. 3 [?]. The colour is all that can be desired, with firm, juicy flesh and very few seeds.—GEORGE T. CARVILLE, Duncombe Park Gardens, Helmsley, Yorks.

Apple, Ribston Pippin.

Amongst the Apples now being so largely sold in fruiterers' shops everywhere, is the Ribston Pippin; and of a surety it is not the least attractive of them. Smooth-skinned, round, about 3in in breadth and depth, and having rich crimson cheeks, the Ribston is at the same time one of the best flavoured and most productive varieties we have. It is usually chosen in the best all-round dozen. It is in season from November till January.

American Society for Horticultural Science.

The constitution and by-laws with the announcement of the above society have been issued. The society's first meeting, with scientific programme, will be held at St. Louis in connection with the meeting of the American Association for the Advancement of Science, December 28 to January 2 next. The date has not yet been decided on, but that and other details will be duly announced.

Societies.

R.H.S. Scientific Committee, Nov. 24th.

Present: Dr. M. T. Masters F.R.S. (in the chair); Messrs. Odell, Baker, Saunders, Chittenden, Worsdell, Holmes, Massee, Douglas, and Nicholson; Dr. M. C. Cooke, Professor Boulger, Rev. G. Henslow, Hon. Sec.

Scientific investigations at Wisley.—Professor Boulger remarked that it would be a comparatively inexpensive procedure to erect a Pine wood building on a brick foundation for laboratory, store-room, &c., probably not exceeding £100 in cost. It was proposed to add this suggestion to the memorial to the council.

Canker in Apple trees.—Badly diseased twigs were received from the neighbourhood of Salisbury. They proved to be attacked by *Nectria ditissima*. The only remedy suggested by Mr. Massee was to prune off all small wood and burn it, as well as to cut out diseased parts of boughs, and tar the places.

Pear shoots diseased.—Specimen of diseased shoots was received from the Priory, Eynsford, Kent, from Mr. E. D. Till. Mr. Massee suggested the following procedure: "The twigs are attacked by a fungus called *Fusicladium pirinum*. All diseased twigs should be pruned, and, along with fallen leaves and fruit lying under the tree, collected and burned. It would be an advantage to spray the tree with Bordeaux mixture next spring, just after the leaf-buds have expanded."

Experiments for commercial purposes.—Mr. F. Baker reported some results of his experiments and observations on leguminous plants. For the last five years a few varieties of garden Peas, field Peas, Runner Beans, Vetches, Sainfoin, and other plants of the same N.O. have been grown on good and poor soil respectively, parts of each plot being specially well tilled, parts dunged, and parts treated with phosphatic and potassic fertilisers. Strips were arranged so that some spots should be well tilled, and also have a dressing of all the fertilisers, and other spots to vary from nearly the same treatment to the poorest field culture. Results have shown that garden Peas and Beans cannot be profitably grown in very poor soil, manured solely by mineral fertilisers; but these respond well to tillage, dung, and then the minerals. On the other hand, Vetches, field Peas, Sainfoin, and others of the older plants grown on the farm can be most profitably grown on poor soil, manured solely with minerals. Dung will largely increase the yield of stem and leaf in all, but does not materially increase the yield of seed. If, therefore, seed be required, grow on poor chalky soil without dung; but if fodder is required, dung may be profitably used as well as minerals. The experiments also show the great use of the Vetch in ameliorating the soil, greatly enriching it, and, at the same time, cleaning it very economically. It is suggested that garden plants having been for many generations forced to an unnatural extent, are not able to adapt themselves to different conditions of soil, &c.; whereas field crops which have had to seek for food to a large extent, are able to develop specially well-formed roots, which easily absorb water and such phosphatic, potassic, and other mineral plant foods as are available, and on these roots are developed large numbers of nodules by means of which an ample supply of atmospheric nitrogen is assimilated.

Hull, Nov. 18th and 19th.

Like the Scottish Horticultural Association in Edinburgh, the Hull Society has abolished showboards entirely this year, and the change seems to have met with approval. The show arrangements were admirably carried out, and Mr. J. Dixon and Lieut.-Colonel R. E. Johnson, the hon. secretaries, may be heartily congratulated on the manner in which they performed their respective duties. The group classes were not such a good feature as usual, but the cut blooms, plants in pots, and table decorations were splendid. It is to be regretted that there were no entries in the two largest classes, viz., for 25 incurved and 25 Japanese. While there is very much to be said for the vase classes, their adoption to the total exclusion of cut blooms on boards prevents the best competitors from a distance exhibiting, for naturally flowers on long stems are less readily carried about.

Cut Blooms.—In the class for 20 Japs in not less than five varieties, there were five competitors, all of whom staged meritoriously. Mr. George Walker, gr. to C. E. A. Lyon, Esq.,



Apple, Ribston Pippin.

The Lair, Hornsea, led, staging blooms of Marquis V. Venosta, Sensation, Charles Longley, Madame Gustave Henry, and C. J. Salter; Mr. C. Jennings, gr. to F. W. Jameson, Esq., Aston Hall, North Ferriby, was a close 2nd, his blooms of F. S. Vallis and Lady Hanham being remarkable for finish and size. In the class for 10 blooms, distinct, Mr. G. Walker was 1st with excellent examples; Mr. J. W. Backhouse, North Bar, Beverley, was a close 2nd; and Mr. H. Harvey, gr. to G. Tether, Esq., Broxholm, Anlaby Road, Hull, was a good third. For 15 blooms, 5 each of Mrs. Dixon, Mrs. George Glenney, and Mrs. Rundle, there were 3 entries, Mr. W. Sinclair, gr. to H. Whitty, Esq., Cottingham, being 1st; 2nd, Mr. Anthony Drewery, gr. to W. H. Franklin, Esq., Cottingham. Three vases of decorative brought out a keen competition. 1, Mr. G. C. Coates, gr. to S. L. Haldane, Esq., Hull, with a pretty display; 2, Mr. H. Taylor, florist, Newland, Hull; 3, Mr. G. Cottam, Alma Gardens, Cottingham. Five Japs one variety (7 entries). 1, Mr. George Walker, gr. to C. E. A. Lyon, Esq., The Lair, Hornsea, with Mrs. George Mileham; 2, Mr. H. Harvey, gr. to G. Fletcher, Esq., Broxholm, Anlaby Road, Hull, with Rev. Douglas; 3, Mr. Anthony Drewery, gr. to W. H. Franklin, Esq., Cottingham, with Lady Hanham. There were 6 competitors in the class for 20 blooms, in not less than four varieties and the premier award, a silver cup and cash prize, was won by Mr. J. W. Backhouse, who had John Agate (the premier bloom in the open classes). Mr. C. T. Flower, gr. to R. Hodgson, Esq., Molescroft, Beverley, and Mr. H. Harvey were placed thus. For 10 blooms of incurved Mr. C. Jennings, with grand blooms led; Mr. J. W. Backhouse was 2nd. The prizes for a vase of 5 blooms of any one variety of Japanese, were awarded to Mr. G. Walker, Mr. H. Harvey, and Mr. A. Drewery, gr. to W. H. Franklin, Esq., Cherry Garths, Cottingham. For 10 Anemone blooms 3 entered, and 1st, Mr. G. C. Coates, gr. to S. L. Haldane, Esq., Colman Street, Hull; 2, Mr. J. W. Bearpark. Ten reflexed blooms (2 entries). 1, Mr. Anthony Drewery, gr. to W. H. Franklin, Esq., Cherry Garth, Cottingham; 2, Mr. J. W. Bearpark, Hull. Twelve bunches of pompons (5 entries). 1, Mr. G. C. Coates, gr. to S. L. Haldane, Esq., Colman Street, Hull; 2, Mr. W. Sinclair, gr. to H. Whitty, Esq.; 3, Mr. Anthony Drewery, gr. to W. H. Franklin, Esq., Cottingham. Twelve bunches of singles (6 entries). 1, Mr. G. C. Coates; Mr. Anthony Drewery 2nd; 3, Mr. W. Sinclair. Eight classes were specially provided for amateurs, and in all of them the competition was keener than usual, notwithstanding the change that was made in the method of staging.

PLANTS (OPEN).—Group of Chrysanthemums and other plants. 1, Mr. G. Cottam, Alma Gardens, Cottingham, with a very light exhibit; 2, Mr. Whittaker, Cliff House, Hull; 3, G. Thorpe Wilson, Esq., Brantingham Thorpe, Brough. Mr. G. C. Coates, gr. to S. L. Haldane, Esq., Colman Street, Hull, was 1st for a mirror panel group of Chrysanthemums and other plants; Mr. John Foster, jun., Newland, 2nd. Chrysanthemum plants suitable for table decoration. 1, Mr. G. C. Coates, gr. to S. L.

Haldane, Esq., Hull, with an excellent group; 2, Mr. W. H. Young, Worthing Street, Beverley Road, Hull.

Aberdeen Chrysanthemum, Nov. 20th and 21st.

The annual show was held on the dates given, and was very successful, there being 700 entries. Mr. M. H. Sinelair is secretary. Those staging honorary exhibits were Messrs. W. Thomson and Sons, Limited, Clovenfords, near Galashiels, who had a display of Grapes cut from Vines which have been heavily cropped for the past thirty-three years, and these Vines were nourished by Thomson's Vine manure. Messrs. Cocker and Sons, Aberdeen, had a collection of new varieties of Potatoes all in fine condition. There were other exhibits. The leading prize for a semicircular group of Chrysanthemums was taken by Mr. John Proctor, gr. to Sir William Henderson, Devanha House, Aberdeen; 2, Mr. F. Munro, Stoneywood House; Mr. G. Maitland, Woodside, 3rd. Mr. W. Patterson, Park, carried off the premier honours for 12 vases Japs, 12 varieties, beating Mr. W. M. Moir, Rosehaugh, Ross-shire. In the class for 24 blooms in 12 varieties, Mr. W. Patterson, Balmedie, led; 2, Mr. John Grigor; and the 3rd by Mr. John Petrie, Crathes Castle. For 18 Japs in 9 varieties the lead was taken by Mr. Ed. Joss, Sunnyside House, Montrose. The 2nd prize went to Mr. Frank Fraser, Tillery House, Uduy; and the 3rd to Mr. G. Barbour, The Knoll, Elgin. Mr. A. Murray had the best 12, he was followed by Mr. George Jamieson, Burton Hall, Loughborough; and 3rd, Mr. G. G. Stuart, Aden House, Mintlaw. In the class for 12 incurveds the 1st and 2nd prizes were secured by Mr. George Jamieson. For 6 incurveds, 3 varieties, the lead was taken by Mr. W. Patterson, Balmedie, who was followed by Mr. J. Pirie, Strichen House, and by Mr. A. Brebner, Dalhousie, Cults, in the order named. In a class for 12 varieties of Chrysanthemums Mr. James Smith, Grantown-on-Spey, took the lead, followed by Mr. John Sim, Glenburnie, Park, and Mr. A. Douglas, Keppleston.

National Chrysanthemum, Annual Dinner.

The annual dinner of the members was held last Wednesday week in London, there being a large company present, and presided over by Mr. Charles E. Shea. After having proposed the loyal toasts, the chairman spoke to the toast of the National Chrysanthemum Society, and said how gratified he was at having been asked to become president. He embraced the present opportunity to thank the members for the honour done to him, and then proceeded to give a brief review of the society's history. It had had a continuous record since 1846, when it was established as the Stoke Newington Chrysanthemum Society. Mr. Robert James was the founder of that body, and of the original members, two were alive in 1896, namely, Arthur Walkley and J. George.

In those early days, to raise and stage twenty-four distinct varieties was practically an impossibility to most gardeners, and a class for twenty-four only drew forth two competitors, the Huttons, father and son. One nurseryman was able to stage twenty-four in his section of the schedule.

In 1862 and 1864 it seemed that things were becoming critical (said Mr. Shea), for the officers were presenting testimonials to the chairman (a silver snuffbox), and in 1864 the secretary got a silver eup. Not only did the society, however, survive this: other societies caught the idea too.

In 1874 the name was changed to the Stoke Newington and Hackney Chrysanthemum Society, and in the following year to the Borough of Hackney Chrysanthemum. The first show, held in the Royal Aquarium, Westminster, was in 1877, and a year later, Mr. Wm. Holmes was elected secretary. Then in 1884 came the most important change of any, the change to the name it still bears, and the suggestion, "by a stroke of genius," was due to Mr. Henry Cannell, of Swanley. By one proclamation (continued the chairman) we annexed the British Isles, for everywhere there are votaries of the great Autumn Queen. Mr. Harman Payne became a member also in 1884, and subsequently the official catalogue was published. Lord Brook was then president, and the secretary having died, Mr. Richard Dean was appointed in his stead. These were milestones in the journey; others were the Jubilee celebrations in 1895, the Chrysanthemum Conference, and lastly the transfer of their place of exhibition to the Wesleyan Methodists. This rendered them homeless, so to speak, but the Crystal Palace had been their refuge. The president said that it rests with the committee to see what the Crystal Palace means. He thought it a crying shame that in this great city they could not have a suitable hall, and the new hall of the Royal Horticultural Society would be too small.

The foregoing facts were the direct history; the indirect history lay in the development of the Chrysanthemum to what it is to-day. In France, in Germany, in Australia, and the U.S.A., the golden flower is increasingly popular. Mr. Shea drew attention to a statement in one of the gardening papers which accused the large Chrysanthemums with being the means of depraving public taste. "But if this flower has grace, finish, beauty, colour, &c., is mere size a crime?" he asked, in accents of reproach and surprise. Is there a deliberate intention in the

case of the Rose or any other flower, to say, Thus far, and no further, in size? Mr. Shea thought not; and said that surely there is room for all types of blooms. He called on Mr. Cannell to say a few words.

Mr. Cannell took his hearers with him back to a show at Stoke Newington in 1851, where there were no cut flowers, so far as he remembered, and only a few large plants. Mr. Cannell had attended all the shows of the National. In 1851 the fashion was all for incurved varieties, and it was the Stratford people who first brought forward the Japs. Mr. Robert Fortune introduced some long-tasselled varieties from Japan, and these were distributed. All the varieties of to-day had come from these. Geo. Rundle (incurved) came into existence in 1860; and George Glenny was another of the oldest. Mr. Cannell suggested that it would afford unbounded interest if a class could be set aside for those old favourites of forty years ago that have fallen out of the ranks. This concluded the two most interesting speeches of the evening. There were, however, numerous others in connection with the various toasts. The shields, cups, and medals



Mr. C. E. Shea, President N.C.S.

won at the November show were presented to the winners of them. In replying to the toast of the chairman, Mr. Shea remarked that he had grown his plants from the "cutting" to the staging of a first prize forty-eight blooms at an N.C.S. show. He traced his progress from 1886, when he first began as an exhibitor; till 1891, when he gave up. The meeting broke up about 11 o'clock.

Dundee Chrysanthemum, Nov. 27th and 28th.

The annual exhibition of this spirited society was held in the Drill Hall, Dundee, on Friday and Saturday last, and was equal, and in some respects superior, to any of its predecessors. The entries had increased by nearly a hundred, while the quality of the exhibits was, generally speaking, little if any behind those of much larger and more ambitious exhibitions. The hall and the exhibition seemed to suit each other admirably, the arrangements were tasteful, and to the eye of the ordinary visitor the whole presented a most attractive appearance. The principal competitors in the cut bloom classes were Mr. Beisant, gr. at Castle Huntly, and Mr. D. Nicoll, gr. at Rossie. These two well-known growers met at Edinburgh, when Mr. Nicoll gained the much-coveted leading prize, and Mr. Beisant was 3rd. At Dundee, Mr. Beisant turned the tables on his rival, and scored 1st in both the leading classes.

CUT BLOOMS.—For 12 vases in 12 varieties, 3 blooms of each, Mr. Beisant was first with large, fresh, even blooms. The most prominent were Duchess of Sutherland, Madame Cadbury, Sensation, Mrs. Barkley, Elsie Fulton, F. S. Vallis, and Mrs. Mileham. Mr. D. Nicoll, Rossie, was a close 2nd with similar varieties, Madame Cadbury, F. S. Vallis, General Penford, and Miss Florence Molyneux being very conspicuous. For 6 vases, Mr. Adams, St. Clements, Forfar, was 1st with good, fresh blooms, containing fine Elsie Fulton, J. R. Upton, and W. R. Church. Mr. Buckbie, of Linfield, West Ferry, was a good 2nd. For 24 blooms on boards, Mr. Beisant took 1st place with very handsome flowers of leading sorts; Mr. Nicoll was 2nd; and Mr. Cumming,

who gained 2nd place at Edinburgh for the Scottish champion class, was a very creditable 3rd, running the others very closely. For 18 blooms in 3 separate colours—white, yellow, and purple or mauve—Mr. Beisant was again 1st; and Mr. Johnstone, Ramornie, 2nd. In the amateurs' class for 12 blooms, not less than 6 varieties, Mr. J. Higgins, Anstruther, was 1st with a very pretty stand, closely followed by Bailie Melville, Dundee, who would have won the challenge cup if he had obtained premier place this time, but though very near he was doomed to disappointment. Better luck next time, worthy Bailie!

Vases for effect are always well shown at Dundee. The dozen vases of singles shown were superior to anything seen this season. Vases of undisbudded blooms were also good. Baskets and bouquets were beautifully shown, and had a most artistic appearance. A display for effect on a circular table, 6ft diameter, of cut flowers, flowering plants, and any foliage in pots or cut. This prize brought 3 competitors, and arranged in the centre of the hall had a very beautiful effect. First position was accorded to Mr. Fairweather, gr. to Lord Provost Barrie. The leading features were cut Chrysanthemums and Poinsettias, beautifully relieved with Cocos Weddelliana and other foliage. Mr. Beatts, gr., Binroch, was 2nd, with a very graceful exhibit but not so massive as the other.

Plants were fairly numerous and of fine quality. The class for 6 pots were as well grown as any we have seen this season. First place was secured by Mr. Scott, Seathwood—N.C.S. Jubilee and Lady Audrey Buller were very fine; 2, Mr. Kinnear, Fernbrae. In a class for 6 plants in 6in pots Mr. Beatts, Binroch, led with Nellie Pockett. A competition for plants grown by juveniles was very interesting, a large number of plants were shown in this class, and the quality was very good. Of miscellaneous plants there was a fair show. Table plants were specially well done, and the 1st prize lot in a competition for 4 winter-blooming Begonias in 7in pots were perfect. The grower of these (Mr. Saunders) deserves the highest praise.

Fruit was a small show of fair quality. Vegetables were numerous and good. The 1st prize collection of 8 kinds from Mr. Kinnear, Fernbrae, were fit for any show. All were good, but Cauliflowers, Celery, Leeks, and Onions specially so. Other vegetables in separate classes were well shown.

NON-COMPETITIVE EXHIBITS.—The exhibits of the local trade added greatly to the beauty of the show. They were not only numerous, but of great interest and attractiveness, and in beauty of arrangement excelling the exhibits at many of the larger exhibitions. The most popular was a very pretty exhibit of floral designs by Messrs. Laird and Sinclair, Dundee. They had handsome designs of a lyre, a harp, and an upright cross of Violets and Roses. There were also a number of very pretty bouquets, one of Daffodils reminding the onlooker that spring, with its complete change of flowers, will soon be upon us.

Messrs. D. and W. Croll, Dundee, had an extensive exhibit of plants and cut flowers, and a number of floral designs.

Messrs. Storrie and Storrie's exhibit was characteristically well arranged. It had many good things, but their splendid plants of a very rich form of *Salvia splendens* were most prominent, adding a brilliancy to the whole exhibition. Other plants were also well shown by Messrs. Storrie as the special products of their "Invincible" liquid manure.

Messrs. Thyne and Paton had a nice exhibit of various winter plants, and Mr. Grossart also put up an attractive table of plants and handsome floral designs. The Ichthemic Guano Company, Ipswich, exhibited samples of their well-known manures on a table richly decorated with Palms and cut Chrysanthemums.

Unfortunately, the weather was most unpropitious during the two days of the show, in consequence of which we fear the money drawings at the door were not in proportion to the merits of the exhibition.—NORTHERN SCRIBE.

Potatoes at the Cattle and Root Show, Birmingham.

Despite the somewhat untoward season, Potatoes were remarkable for quality throughout, and a similar remark equally applies to the Swedes and Mangolds. In the class for the best new variety of Potato not yet in commerce (12 tubers), the Duke of Portland was accorded the 1st prize (£1) for an unnamed, very handsome, smooth-skinned and small, shallow-eyed tuber variety like Satisfaction. The 2nd prize fell to Mr. S. T. Parker, Scotforth, Lancaster, with Duke of Lancaster. For the most handsome dish of any variety Messrs. F. Williams, Thornbury, and Benjamin Parker, Scotforth, won respectively; each with Satisfaction. For one variety (round), Messrs. F. Williams and S. T. Parker each won with Satisfaction. For one variety (long or kidney shaped), the positions of the last-named winners were reversed, with Satisfaction and Sensation respectively. In the class for 12 varieties (1st prize £5), the veteran exhibitor, Mr. D. H. Wells, Tysoe, near Kington, repeated his last year's feat of annexing the 1st prize with an excellent complement of British Queen, Vicar of Laleham, Abundance, Edgemoor Purple, Satisfaction, Up-to-Date, Mr. Bresee, Goldfinder, Lord Tennyson, Reading Russet, Webbs' Goldfinder, and The Dean, every dish of which was as perfect as Potatoes need be. Mr. B. Parker was 2nd and 3rd; there were four other entrants.

For 6 varieties Mr. S. Parker won with fine specimens of Satisfaction, Peerless Rose, Lord Roberts, Cramond Blossom, Edgemoor Purple, and Sutton's Reliance; 2, Mr. D. H. Wells; and 3, Mr. B. Parker. For 4 varieties, 2 white and 2 coloured, Mr. F. Williams was 1st with Satisfaction, Evergood (a model), Pink Perfection, and The Dean; 2, Mr. D. H. Wells; and 3, Mr. B. Parker. For 4 varieties most suitable for field or farm culture (12 tubers each), Mr. F. Williams was to the front with Up-to-Date, Satisfaction, Ideal, and Evergood—together a shapely lot. 2, Mr. S. T. Parker with good examples of Lord Roberts, Reliance, Cigarette, and Satisfaction. Mr. F. Williams in the class for 2 varieties (kidney-shaped or long), was placed 1st, with fine examples of Satisfaction and Sensation; 2, Mr. O. Roberts, Tarporley, with Ideal and Reliance; 3, Mr. B. Parker. For 2 varieties (round), Mr. F. Williams won with Satisfaction and Pink Perfection. There was a total of fifty-five entries.

South Shields and Northern Counties Chrysanthemum.

Nov. 25TH and 26TH.

This very popular exhibition is another instance that in the North the growth and admiration of the Chrysanthemum is not on the downward grade. There are good men at the helm, and a body of enthusiastic workers, who each and all combine to obtain the necessary sinews, and carry out the work in a most laudable manner. The bouquets and cpergnes are always a great feature at South Shields, and this year they were better than ever. A whole table down the centre of the spacious hall of the Royal Assembly Rooms was filled with magnificent exhibits, the well-known firm of Messrs. Perkins and Sons, Coventry, again entering the list, and dividing honours with the northern champion, Mr. Jas. Summers, of Sunderland. The very choicest Orchids and other flowers were used in the arrangements. The cut blooms of Japs and incurveds were generally well up to the standard. The colour was bright and clean. The vase classes were represented only by two or three small exhibits. Perhaps the executive may be able to find room another year for a good prize for large flowers in vases, as Edinburgh, Hull, and the N.C.S., do, and which is now becoming popular with most societies, although it cannot justly be said with all exhibitors.

Five silver cups were offered in addition to valuable money prizes. Mr. F. S. Vallis won the 15 guinea cup offered for 36 Japs against nine competitors, with a very bright stand of good quality. This is the second consecutive win, and thus becomes his property. In this stand there was a fine bloom of Mrs. F. W. Vallis, measuring 9in by 10in. This, and a fine bloom of F. S. Vallis in another exhibit, were selected as the two best Japs in the show, and after consultation, in which all four judges took part, the bloom of Mrs. F. W. Vallis was awarded the premier place.

CUT BLOOMS: JAPS.—For 36 in 18 varieties, 1st prize (by the President of the Society, James Readhead, Esq., J.P.), and £6 in cash (£5, £3, and £1 10s.), went to F. S. Vallis, Bromham, Chippenham, with Mrs. F. W. Vallis, Mrs. Hummelt, Bessie Godfrey, President Viger, F. S. Vallis, Mafeking Hero, Mdme. Herrewage, W. R. Church, Kimberley, Mrs. Whereas, J. Penford, Suzie, and J. H. Silsbury, amongst others. Mr. G. E. Thomas, gr. to the Marquis of Ripon, Studley Royal, Ripon, was a very good 2nd with a bright, solid stand; 3rd, Mr. Jennings, gr. to F. W. Jamieson, Esq., Aston Hall, North Ferriby; 4th, Mr. James Harcastle, gr. to S. C. Salkeld, Esq., Holm Hill, Dalston, Carlisle. Mr. J. Corbett, gr. to the Marquis of Normanby, Mulgrave Castle, Whitby, and Mr. G. MacDougall, gr. to H. Pease, Esq., Arcot Hall, Dudley, also exhibited good stands, only a point or two behind the others.

In the class for 18 Japs, Mr. Vallis was again 1st with a stand of his usual quality; 2nd, Mr. J. Corbett, with a good lot; 3rd, Mr. G. E. Thomas. For 12 Japs Mr. Vallis was again 1st; Mr. Harcastle, 2nd; with Mr. Spowart, gr. to J. White, Esq., Low Fell, 3rd.

INCURVEDS.—In the class for 36, in 18 varieties, for which Mr. Alex Purvis offered a five-guinea challenge cup, and £6 in money (other prizes of £4, £2, and £1), two very even stands were staged. The first went to Mr. Jennings for a stand of blooms even and fresh. The best being Mr. J. Agate, R. C. Kingston, Miss Southam, Hanwell Glory, Chas. Curtis, Lady Isobel, Golden Empress, Wm. Higgs, Miss E. Seward (very good), and F. Southam. Second prize to Mr. Thomas, for a stand that contained some very fine blooms in his back row. Mr. Thomas was more fortunate in another class for incurveds, being 1st. The classes for amateurs and local exhibitors were well contested, and contained many very creditable exhibits. Mr. T. N. Alexander offering a five-guinea cup for 18 Japanese, with £1 10s. in money for 18 Japanese, which was won by Mr. T. Reay.

GROUPS.—For a group of Chrysanthemums and other foliage plants, Mr. C. F. Sutcliffe offered a silver cup, value £5 5s., with a money prize of £5, 1st prize. (Other prizes of £4, £2, and £1). The cup was won by Mr. T. Pattison, gr. to W. C. Gray, Esq., West Hartlepool, with an undulated group that contained some choice Orchids, and showed much taste in the arrangements. The 2nd went to last year's winner, Mr. Geo. MacDougall, who

had the heaviest Chrysanthemums, but there was a scarcity of flowers and a lack of finish in the front part of the group. Mr. Thos. Reay was 3rd, with a bright bank of flowers.

BOUQUETS AND EPERGNES.—As previously mentioned, these are special features at South Shields. The display created a great attraction to the very large body of visitors. In addition to the 1st prize of £2, for a bouquet, an additional special prize of £2 2s. is offered. Messrs. Perkins and Sons, Coventry, were 1st with a very light and elegant arrangement in their well-known style; 2, Mr. Jas. Summers, florist, Sunderland, whose group was heavy in the body; 3, Miss Dora Summers; 4, Mr. Webster, Sunderland. In the corresponding class for a bridal bouquet, Mr. Jas. Summers was 1st, Messrs. Perkins and Sons following very closely. For an epergne, Mr. T. Pattison, West Hartlepool, was 1st, and Mr. J. Summers 2nd. For a Chrysanthemum epergne, Mr. T. Battensby, Blaydon, was 1st. The other local classes for epergnes were very creditable. For ladies' sprays and buttonholes Messrs. Perkins and Sons, G. Hilliar (Darlington), J. Summers, and T. Battensby were the most successful exhibitors.

The show of vegetables in the basement of the hall was a very fine one, but the fruit, as in other places this year, was scarce.

A very effective collection of Celosias, Chrysanthemums, and other plants was staged in front of the orchestra by Messrs. Clibran and Son, and a table of winter-flowering Carnations, in vases, came from G. Boyes and Co., Aylestone, Leicester. Others contributed non-competitive groups.

To the Hon. Secretaries, Mr. Bernard Cowan, F.R.H.S., and Mr. Thomas A. Binks, Mr. Alex. Purvis and Mr. J. E. Stout (chairmen of committees), with Mr. J. T. Reed and Mr. C. C. Walton, Hon. Treasurers, much of the success of the show is due; and the staging was ably carried out by Mr. J. Thompson and Mr. A. C. Wood. The judges were: For cut blooms—Messrs. J. W. Moorman, Victoria Park, London; C. Orchard, Bembridge, Isle of Wight; and Mr. M. D. Thompson, gr. to Sir Lindsay Wood, Bart., Chester-le-Street, and Mr. R. Robson, Superintendent, Blythe Park.—C. O.

Scottish Horticultural Association.

The monthly meeting was held on the evening of Tuesday, December 1, in Dowell's Rooms. There was a very large attendance of members, and after the nomination of nineteen life and over a score of ordinary members, Mr. Smale, gardener Blackford Park, Edinburgh, read a most interesting paper on "Hybrid *Streptocarpus* and their Culture." Mr. Smale began his remarks with an account of the introduction of the various species of *Streptocarpus* and their hybridisation, mentioning that Messrs. Veitch, of Chelsea, had been the first in the trade to introduce the present race of hybrids. Mr. Smale then, in a lucid and very interesting way, described his practice in raising and cultivating from seed, from cuttings, and from division of the roots. Mr. Smale's paper was highly instructive, and was listened to with the greatest interest. An animated discussion followed, taken part in by Mr. Comfort, Mr. Whyttock, Mr. Grieve, Mr. Lamont and others. A most hearty vote of thanks was awarded to Mr. Smale.

Exhibits were not numerous, but were very attractive. Mr. Wood, gardener, Oswald House, sent a very beautiful specimen of *Cattleya labiata*, with about twenty blooms. Mr. Smale exhibited (in illustration of his paper) a beautiful vase of *Streptocarpus*, very varied in colour. Mr. Davie, seedsman, Haddington, exhibited specimens of his new Potatoes—Dunoon, King Loth, and Warrior. Mr. Todd, florist, Shandwick Place, exhibited a very handsome vase of *Souvenir d'un Amie*, grown for decorative purposes; also a very beautiful vase of forced Daffodils.

After a short statement as to the financial results of the recent highly successful exhibition, it was agreed that next year's Chrysanthemum Show be held on November 17, 18, and 19, 1904.

Royal Meteorological.

The opening meeting of this society for the present session was held on Wednesday evening, the 18th ult., at the Institution of Civil Engineers, Great George Street, Westminster; Capt. D. Wilson-Barker, F.R.S.E., President, in the chair. Dr. H. R. Mill and Mr. R. G. K. Lempfert gave an elaborate and interesting paper on "The Great Dustfall of February, 1903, and its Origin." From the maps exhibited it appears plain that the dust reported on February 21 or 22 fell over nearly all parts of England and Wales to the south of a line drawn from Anglesey to Ipswich, except in parts of North Cornwall, Somerset, Wilts and mid Wales.

The dust usually attracted attention either in the form of a dense yellow haze, like a London fog, or as a reddish-yellow powder lying thickly on trees and roofs. The fall was often accompanied by temperatures considerably above the average and by remarkably low relative humidities. In order to ascertain whether the composition of the dust threw any light on its origin, about fifty samples were submitted to the Geological Survey, and examined by Dr. J. S. Flett. In addition to the

coarser particles, all the samples contained a very fine grained reddish clay, the particles of which were too minute to be determined mineralogically. This clay was certainly derived from some source beyond the British Isles, but it was not distinctive enough to afford much evidence as to its place of origin. Maps have been constructed showing the distribution of the dust and the meteorological conditions prevailing over the period when it appeared. These form the basis of a discussion by Mr. Lempfert as to the place of origin and the direction of travel of the air which was passing over Western Europe at the time in question.

The trajectories of the air which reached the southern half of England can be traced backwards in a south-westerly direction to the neighbourhood of the Azores, but here it turns to the south, and finally to the south-east, and is carried back to the north-west coast of Africa on the morning of the 19th. The authors are therefore of opinion that there is reason to believe that the air which reached the southern half of England on the 22nd started from the north-west coast of Africa on the 19th, and they consider this affords strong evidence of the African origin of the dust, and of its having travelled to North-west Europe by a path not very different from that indicated by the trajectories.

Metropolitan Public Gardens.

OPEN SPACES.—At the monthly meeting of the Metropolitan Public Gardens Association, held at 83, Lancaster Gate, W., the Hon. Dudley F. Fortescue, Vice-Chairman, presiding, a communication was received from the recently formed Midlands Re-forestation Society, and it was agreed to express the warm sympathy of the association with this movement for planting with trees the ugly waste heaps which occupy so large an area of the "Black Country." It was agreed to ask the Metropolitan Borough Councils to co-operate in appealing to the House of Lords against the recent decision of the Court of Appeal, whereby it was held that buildings could be erected upon the boundaries of a public recreation ground, thereby depriving it of sunlight and air, instead of being set back a reasonable distance therefrom, as would be the case if the ground were privately owned.

It was stated that the London School Board were arranging to acquire Wycliffe Chapel, Stepney, and the extensive disused burial ground belonging to it, for school purposes, which might lead in the future to the appropriation of this valuable space for building purposes in contravention of the Disused Burial Grounds Acts, and it was decided to ask the Board to choose some more suitable site for a school, and one which would be free from this objection. Correspondence was read with the London County Council in reference to St. Peter's Square, Hammer-smith, which is in danger of being built upon, the Council feeling unable to contribute to the cost of purchase owing to the excessive price. Great interest was shown in the proposals of the Council for securing the preservation of London square gardens and similar enclosures, inasmuch as the association had been instrumental in acquiring and laying out some twenty grounds of this character, which the public now enjoy, but since the Council had become a purchaser at building values, it had not been possible to acquire such sites by negotiation as heretofore.

It was decided to await the embodiment of the proposals in a Bill before expressing an opinion thereon. Progress was reported with regard to schemes for acquiring an extension to Hampstead Heath, Springfield Estate, Upper Clapton, and the Norfolk Square area, Islington. Proposals for tree planting in Bedford Row, W.C., Queen's Road, Battersea, St. Thomas's Street, S.E., Brixton Road, St. George's and St. Saviour's Churchyards, Battersea, were agreed to, and it was decided to ask the Governors of St. Thomas's Hospital to preserve the triangular space in Lambeth Palace Road. Schemes for dealing with churchyards in Poplar and Stratford, West Square, Southwark, and many other sites were under consideration.

Wargrave Chrysanthemum Show.

The object of this show is referred to under "Readers' Views." In this place we furnish a short report. A. B. Gill, Esq. (gr., Mr. W. Pope) had a very effective group of foliage plants. Mr. M. Brodie, gr. to S. Platt, Esq., showed a large bank of Chrysanthemums. Mr. T. Powell, gr. to Mrs. Noble, had a large group of specimen stove plants. Mr. A. McKenzie, gr. to Mrs. Groves, a group of well-grown Chrysanthemums and foliage plants. Mr. G. Wicks, gr. to Mrs. Lawrence, a splendid table of dwarf Chrysanthemums, Begonias, Palms, Cyclamens, and Ferns. Mr. W. Scott, gr. to Captain Coleridge, a large table of well-grown Gloire de Lorraine and Turnford Hall Begonias. Mr. Turnham, gr. to W. H. Barber, Esq., filled a large space with cut Chrysanthemums in vases. Mr. Bazely, Twyford Nurseries, sent a group of Succulents and a harp of Chrysanthemums. Mr. Priest, gr. to J. Tarbutt, Esq., a table of foliage plants. Mr. Goddard, gr. to C. S. Henry, Esq., a long table of well-grown Primulas, Chrysanthemums, Cyclamens, Ferns. Mr. Strachen, gr. to Lady Donaldson, a splendid exhibit of cut Chrysanthemums arranged with grasses. From Park Place came baskets of Lilies, fruits, berries, foliage, lyre of Bougainvillea, new Potatoes, &c.

Mr. Stanton made a novel exhibit in autumn tints, also skeleton leaves and fruit on velvet. Lady M. Mackenzie's gardener put up 4 vases of eut blooms. Mr. Brodie and Mr. G. Wicks staged some fine examples of Grapes and Apples. Mr. T. Haskett, gr. to J. W. Rhodes, Esq., staged a large collection of vegetables; also Messrs. Straehen and Wicks. From Mr. Dixon came a table of fretwork done in spare moments.—J. BOTLEY.

Reading Gardeners.

The usual fortnightly meeting was held on the 25th ult., the president, Mr. Leonard Sutton, presiding over a good attendance of members. The subject for the evening was "The Seeding of Chrysanthemums in England," and was introduced by Mr. Pole-Routh, Oakfield, Reading. The paper proved to be a very interesting one, and a good discussion followed, in which the president, Messrs. Barnes, Bassel, Alexander, Wilson, Wicks, Dore, Judd, Stanton, Neve, Exler, Tufnall, and Winsor took part. The exhibits were a feature of the meeting. Honorary: Group of seedling Chrysanthemums, several of the plants carrying large blooms, by Mr. Pole-Routh; seedling Chrysanthemum plants by the president; eut blooms of Chrysanthemums (24 vases) raised from seed sown in January, 1903, by Messrs. Sutton and Sons; two specimen plants of *Daphne indica* growing on their own roots, and a vase of *Ranunculus* by Mr. Harris, The Gardens, Mapledurham House. For the certificate, 24 table plants, by Mr. Wynn, The Gardens, "Samoa," Reading. The plants were well grown, and the certificate was awarded.

Manures.

Phosphates for Fruit Trees.

To the old-time gardener, the value of dung obtained from various sources was usually estimated by its appearance, and the observant faculties of those thoroughly practical men usually enabled them to arrive at a pretty correct estimate of the value of the various materials at command, in regard to their suitability for the culture of the majority of crops. Modern scientific research has, however, enabled us to gain a far better knowledge of the principal constituents of manures, and of their effect when applied separately, and the gradual spread of this knowledge is developing more economical methods of manuring. It is now generally understood that nitrate promotes growth and increased vigour; phosphate, fruitfulness and early ripening, and the latter also ensures firmness of texture in the growth of trees and crops. Potash increases the store of sugar, and therefore improves the quality of fruits.

The cultivator who thoroughly grasps these principles is in a far better position to manure effectively, yet economically, than one who regards manures of all descriptions as being so much material for promoting growth of some kind or other. This lack of definite knowledge was formerly undoubtedly the greatest factor in causing practical men to look upon dung as being the best of all manures, and also gave rise to the erroneous idea that trees and crops which grew too strongly when dung was applied, should have manure withheld entirely. Because heavy dressings of dung caused young fruit trees to grow too strongly, many became imbued with the idea that fruit trees generally required no manure, and that idea was to a great extent contributory to the production of the inferior samples of fruit seen on starved trees. Old trees, when bearing good crops, are undoubtedly benefited by heavy dressings of farmyard manure; but there are other trees which, although growing strongly, may be improved and rendered more fruitful by the application of one of the constituents which go to form a complete manure. The great fault of dung as a manure for fruit trees is that when using it we cannot apply the constituents separately, therefore in some cases trees receive an additional quantity of what they have already had too much. This is especially the case in regard to nitrate. Although there can be no growth made unless the three plant foods above recorded be present in the soil, it is nevertheless possible for the presence of too much nitrate to cause the production of improperly developed, hardened tissue; and then the result is strong, unripened wood.

The value of phosphates in fruit culture has not received the attention from practical growers that it should, and a much freer use of some form of phosphatic manure would, I am convinced, benefit fruit-growers in this country immensely. We must not attribute all the failures this year to the spring frosts, for unripened wood which produced imperfectly developed flowers, was also largely a contributory cause, and regular efforts should be made to ensure the production of the right kind of wood in the future. Trees have this year made a great amount of strong growth on account of the heavy rains and the absence of fruit to check growth; and although a thorough thinning of the branches at once may do something to assist the wood, other means should be taken to secure the right type of growth next year. The

application of phosphates to trees which have grown strongly will do much good in this respect.

On stiff land, basic slag, applied at the rate of 6oz per square yard to the surface soil beneath such trees, as far as the branches extend, will undoubtedly prove advantageous. On lighter soils, superphosphate should be applied early in spring at the rate of 4oz to 6oz per yard, this to be preceded by a dressing of lime or chalk during the autumn, because the "super" makes a great demand on the lime in the soil. The two forms of phosphatic manures are the most economical for ordinary purposes, but when a bone phosphate is preferred, steamed bone flour should be used.

In many gardens where the soil is rich and deep Red Currants often grow far too strongly to be profitable, and I know of some instances in which they have been uprooted because of their



Raphiolepis ovata.

unfruitfulness. If, however, they are summer pruned, and dressed with phosphate annually, the strongest growers may be brought into a satisfactory condition. This valuable bush fruit succeeds splendidly in a strong soil where the roots can force their way between the fragments of stones intermixed with earth. Under such conditions the growth made is short-jointed and fruitful, probably owing to the large amount of phosphates such soils contain.—H. D.

Raphiolepis ovata.

The Indian Hawthorn blooms in June, and its flowers much resemble a *Crataegus*. The foliage is ovate, stiff, and shining; indeed, very handsome. The genus is Chinese, and not quite hardy with us, though in sheltered gardens *R. ovata* succeeds out of doors. It is well worth a try.

Trees of the Bible.

(Concluded from v. 492.)

The Poplar, I think, is noticed once or twice, and this is probably the white species; while the Ash, from which idols and graven images were made, was not an ordinary Ash tree—which does not grow in the Holy Land—but either the Pine or what is termed the Manna Ash [which is an Ash.—ED.] Two imported woods referred to on several occasions are the Almug, which was brought in during Solomon's time for building purposes and for manufacturing into musical instruments, and may be assumed to be the Sandal Wood of India; and Ebony, which was a hard wood brought over as merchandise also from India to Tyre.

Few other trees remain to be treated of. Among the remainder, however, we hear of the Chestnut, which is again a misnomer, being the Plane tree, and which grew in some profusion along the banks of the Jordan, the true Chestnut probably not being existent in Palestine, and the Cypress spoken of by Isaiah as a forest tree, and used for idols. It was doubtless a Juniper, which grew round about Lebanon. It was, however, not the same as the Juniper mentioned in another place, which was apparently a kind of Broom, growing in the wilderness about Sinai, and under one of which Elijah is stated to have lain down. Another bush which played a conspicuous part was the Acacia, supposed to represent the burning bush. It was, at any rate, a thorny shrub and very abundant. There is a scant reference or so to the Willow, which was the Babylonian or Weeping Willow, and was met with as its nature demands, as at the present day, by the side of brooks, rivers, and watercourses. Thus Isaiah talks of "springing up as a Willow by the water." The Sycamine, it is thought, was the common Mulberry tree.

We have now—with a passing mention of the Apple (really Apricot), the Pomegranate, and the Nut (that in Song of Solomon being the Walnut, cultivated by the Jews for its fruit)—only to deal with the two highly and extensively cultivated fruit-producing trees, the Fig and the Date. The former was in that country and in those days, a very necessary food, being an article of diurnal consumption both in Palestine and Syria. It was an emblem alike of security and prosperity. To dwell under one's own Fig tree was indeed quite the respectable and correct thing, according to the primitive conditions of the time. It is a curious fruit, having at certain times the produce of two seasons upon its branches at one and the same time.

Lastly and in conclusion, there is the Date Palm, that beautiful and fruitful tree which grows with its feet in the cool, moist earth, and its stately head in the burning sun. "To flourish like the Palm" was apparently an axiom of extreme well being. Its delicate fruit needs, of course, no description here. Its day and generation, however, like so much in that sad and retrograde land, with her bygone history and former prosperous soil, is now but a tale of the past, for however flourishing it was in the time of the Jews, the Palm is now practically extinct in that country.—J. A. CARNEGIE-CHEALES.

The Price of Flowers.

Some thirty-five years ago a young English doctor went on his honeymoon trip to Switzerland. He and his bride spent their holidays midst the mountain scenery, and they gathered the flowers and Alpine plants from each mountain peak they climbed, as a memento of their sojourn. On the last day of their honeymoon the bride's attention was attracted by a beautiful clump of Alpine Anemone, whose starry blossoms shone conspicuously upon the snow and hoar frost of a rock that formed the summit of the peak they were ascending. Anxious to please his bride, the gentleman scaled the rock, but just as he was in the act of plucking the Anemone the thin crust of earth on which they grew slipped, and he was precipitated into the crevasse of a glacier that yawned on the other side. No one could fall from such a height and live. It was impossible even to recover the body, but the guides told the heart-broken lady that in the process of time the glacier would descend into the valley, and it would then be possible to recover the corpse. A calculation was made (continues the "Daily Express") as to the time the glacier would take to descend, and the bride made her home in the little Alpine village at its foot, and resolved to wait this terrible home-coming of her beloved one. For over thirty long years she waited and watched the slow but inevitable progress of the glacier that was bringing her loved one's body to her. Two years ago her patience was rewarded. The glacier descended as the guides predicted, and crystallised in the ice was found the body of her husband, still clasping the Anemones in his hand. It is safe to say that there is not a single Alpine plant that has not been responsible for some terrible tragedy.

THE BEE-KEEPER.

The Age of Worker Bees.

One is frequently asked: How long does a bee live? Not long ago I was driving some bees for an old farmer, who gravely told me he had had those bees thirty years. It is easier to imagine his utter astonishment than to describe it when I informed him that probably there was not a bee of any description that was in the hive the previous summer. It is easy to determine the age that workers will live to, in the summer, in the following manner. If a hive of bees (the common English bee) swarm, take out the queen and replace her by an Italian queen. Closely watch the swarm, and in about five weeks the yellow banded Italian will be seen. Gradually these will increase, and the English decrease, and in about seven and a half weeks the last of the blacks will be seen. This shows that during the height of the season, bees usually live about eight or nine weeks; for the bees, after hatching, generally stay at home and act as nurses for two weeks. As the work in the field decreases, so their lives lengthen; so that those which hatch in August and September live until the next spring.

Italian Bees.

If any of your readers have not tried Italians they ought to do so. The queens are very fertile, producing thousands of busy and hard working workers that beat the blacks easily. They are more easily handled than our native bees, having excellent tempers. The difficulty in this country is to keep the race pure; so they become very expensive, because mongrels have a dreadful temper which it would be difficult to beat. Pure Italians can be easily distinguished, for round the abdomen they have three bright yellow bands.—HYBLA.

Colonies Short of Stores.

It repeatedly happens from various causes, such as neglect of feeding at the proper time, that it is absolutely necessary to feed some stocks at a period when it is not advisable to administer liquid food to them. Colonies that have been placed in a position where the sun does not shine upon them refuse to take down the food given them, although this may be as early as September; and other colonies take the food down rapidly. This is accounted for by the stock going into winter quarters earlier through lack of warmth.

There is little or no difficulty in remedying this state of things if stored combs can be removed from stocks which have excess; but if this cannot be done, the difficulty will have to be met by supplying them with what is termed candy. A colony thus saved will be worth all the trouble and attention this process will necessitate. The recipe for candy is as follows:—To 12lb of sugar add one quart of water, put in a large saucepan—or preserving pan preferred—and place it on the fire, stirring thoroughly until dissolved. Let it boil until the scum arises, which will be very soon, and in order to prevent the syrup boiling over or burning on the bottom of the pan it must be stirred continuously, and skimmed until cleared. As soon as it is perfectly clear add two wineglasses of vinegar, keeping on stirring meanwhile, after which let it boil until sufficient water is evaporated and the bubbles crackle, when it should be removed from the fire and a spot or two dropped from the spoon upon a saucer and allowed to cool. Should it remain sticky or soft it will require boiling again until it sets brittle, when it may be removed from the fire and poured into dishes previously prepared by greasing and allowed to cool in cakes. Cream of tartar may be used in lieu of vinegar if preferred. In this condition the bees will take it down readily, as they require it, without harm. It should however, be placed on the frames under the quilt, above the cluster, the first fine warm day, not in very cold weather, as the disturbance occasioned by opening the hive, &c., in cold weather would excite them, and would consequently be injurious.

Activity during a cold period causes an increased consumption of food, which leaves a residue and overloads the abdomen of the bee, and if the low temperature should continue this will sometimes result in a mild form of dysentery. Any method of feeding during the period of rest is injurious, and should as far as possible be avoided by proper attention at the end of the season. If there is any probability of a stock managing on the stores they possess, it is better to leave the candy until breeding commences, say, about the beginning of February. There is then less risk of any excitement being deleterious, as warm spells are not uncommon, and the extra refuse would be voided before it proved fatal.—E. EATON, Sandbach.

A PIT-MASON DUCHESS.—The following is from the "Chatham News":—"Extraordinary Pear.—Mr. S. Whiddett, of High Street, Rainham, last week picked from a tree in his garden a Pit-Mason Duchess Pear weighing 1lb 10oz."

Young Gardeners' Domain

The Editor welcomes short letters from under-gardeners. Letters should be confined to 500 words in length, should be written only on one side of the paper, as clearly as possible, with one inch space at both top and bottom, as well as at the sides.

Christmas Roses (Hellebores).

Few plants have a better claim to a place in the herbaceous borders than the various species of *Helleborus*, especially the old favoured *H. niger*, commonly called Christmas Rose. In a little village of East Kent there is a cottage which has in its humble collection eight crowns of Christmas Rose, and these have been in the same position for twenty years, and annually they send up thirty or more pure-white flowers from each crown. These, I may say, are in a good loam, with a chalk subsoil, and grow on the north side of the cottage. The soil is seldom moved or manured. The flowers of this variety are very useful for small vases, and travel well.—F. H. W., Yorks.

Freesias.

The Freesia seems to be gaining in popularity, and I should like to give to the readers of the Journal, a small note on the culture of these most popular bulbous plants. I have been most successful with them. The best method, I think, is to place the bulbs about half an inch deep, in 5in pots; and the best compost for them is two parts of good loam, one part of leaf soil, and one part of spent manure, with sufficient sand to make the whole open. Place the pots in a cold frame, and cover with a mat or cocoanut-fibre, and when the majority of them are through the soil, the mat should be removed. They can still remain in the frames, as they delight in cold treatment. When the growths are two or three inches high they should be staked, placing four neat sticks round the sides of the pots; but if time can be spared they should be staked singly, as they look much better and neater. They should then be taken into the greenhouse as required. So soon as the flower spikes appear, liquid manure should be given frequently, as this helps to give a better floraison. After passing out of flower, do not allow them to be neglected, but still feed the plants, as this helps to increase the size of the corns for next year's flowering. But so soon as they show signs of ripening, water should be gradually reduced until they are finally dried off. They should then be placed in a sunny position, so as to ripen them well.—H. J., Journeyman.

Culture of *Stephanotis floribunda*.

The way generally adopted in propagating is by cuttings put in during the winter months from the hardened growths. All that is necessary is to secure pieces of, say, about four joints, which must be cut with a sharp knife to make sure of a perfect callus. Some 4½in pots, neatly drained, and a compost of fibry loam and leaf mould in equal parts, also some coarse silver sand, may be employed. Insert three cuttings in each pot, and dew-over with a fine rose, when the pots may be placed in the cooler part of the stove, only just watering sufficiently to keep the cuttings from shrivelling. As the year turns, the pots may be plunged in a propagating case, when new growths will soon be perceived. If a new stock is now required, no time should be lost in attending to the work, and I prefer stout shoots taken with a heel and about six inches long. When rooted they may be removed into 5in or 5½in pots, using the same compost, and pinch the shoot when about a foot high. This will induce back growths, which, when large enough, ought to be trained separately. The syringe is indispensable if insects appear. As autumn approaches, a rather drier position should be given, also less water, nothing more being required until about the following February. Then it must be determined as to how the plants are to be grown—whether planted out or for pot purposes. In the former case some good sound loam is required, with a little leaf mould, charcoal, coarse silver sand, and good drainage. Many people prefer a mixture of peat, but I have always found a shorter-jointed growth produced and flowers equally fine from the use of the former. The syringe must again be kept going, and the growths evenly trained in a horizontal position on the wires. Avoid an undue shading of the plants below. Water may be given freely, and a little artificial manure top-dressing, or liquid manure, will give a tone to flower and foliage. If grown in pots, 10in will be found a most suitable size for the first season, training each shoot separately to upright pieces of string or very thin wire fastened to the roof, which can be unloosed, and the shoots fastened to the trellis. The same routine may be carried out during the winter. The pinching back of weakly shoots will induce more vigour, and if an eye is kept on the pots as they become filled with roots, and larger ones given, huge plants will soon be the result.—P.



Fruit Forcing.

VINES: HOUSES STARTED EARLY IN NOVEMBER.—Whether Vines are in pots or planted in inside borders the temperature will need to be increased to 60deg at night in mild (55deg in severity) weather after the buds break, gradually increasing it from that stage to 60deg at night when the Vines are in leaf, 65deg by day in severe weather, and 70deg to 75deg in mild weather. Ventilation should be given at 70deg, just a little to insure a change of atmosphere, increasing it with the sun heat, having it rather free at 75deg, and above that temperature, for it is important that the foliage be well formed and solidified. Avoid, however, sharp and drying currents of air, as that cripples the foliage, stunting the growth. Sprinkle the Vines in the afternoon of fine days, and damp the floors twice a day according to external influences, avoiding a saturated atmosphere on the one hand and a dry one on the other. If there be evaporation troughs charge them with liquid manure, the clear drainings of stables and cow byres, but avoid those of pigstyes. Peruvian or ammoniated guano, 1oz to a gallon of water, is suitable for filling the troughs, also for watering Vines in pots or planted out, the liquid being applied at the same temperature as that of the house. Disbudding must not be practised until the bunches show in the points of the shoots, but the Vines should be tied in position as soon as the growth has well commenced, and before the shoots are so long as to be liable to be damaged in the operation.

LATE HOUSES.—Take every possible precaution against damp. Drip is fatal to late Grapes, a single drop getting inside a bunch being sufficient to spoil it, as the decay rapidly spreads. Drip is often caused by keeping the house closed and the pipes cold, so that moisture condenses on the glass and falls from the rafters and sash-bars on to the Grapes. This is common where early ventilation is neglected on fine days, the moisture being condensed on the berries. A little air and genial warmth in the pipes dissipate the moisture and prevent decay in the berries, but too much heat and too dry air cause the Grapes to shrivel; seek, therefore, a dry, cool, and equable temperature, 40deg to 45deg being sufficient, keeping the house closed in damp weather, and when clear admit air freely. Remove all leaves as they become ripe, avoiding sweeping, as dust greatly impairs the appearance of the Grapes. Look over the bunches occasionally, and promptly remove any decayed berries.—ST. ALBANS.

Kitchen Garden.

RHUBARB FOR FORCING.—Strong clumps of roots ought now to be dug up from the position where they have been growing. Large roots are very suitable for the purpose, as it is possible to divide them into a portable size, and thus readily transfer them to the forcing house. Any warm place, where the roots can be accommodated so as to admit soil round them will do for forcing. Should the place, in addition to being warm, be also fairly well charged with moisture, it will be an advantage in accelerating the growth and rendering the supply of water less necessary, but in a dry atmosphere surround the roots with soil, which should be kept moist. Hard forcing is not desirable, though until the turn of the year more heat is required than after, to induce the crowns to push. A temperature of 60deg to 65deg need not be superseded. 55deg to 60deg will induce growth, but rather slower, though the stalks will be stronger.

SEED POTATOES.—It is as well to select these from the general store and keep them to themselves, or if the selection were made at the time of harvesting look over the tubers now and place in a light position safe from frost. Laying them thinly in shallow boxes is the best of all methods of preservation. Medium sized tubers of good shape are the best.

CABBAGES.—The plot containing the plants which have been planted this autumn should be cleared of any accumulation of weeds, and the flat hoe run through the soil. If there are any vacancies in the rows these may be filled up by the introduction of strong plants from the seed bed or nursery bed, lifting them with a ball of soil and roots.

LETTUCES.—Plants in the open ground should be cleared of weeds and masses of decaying tree leaves about them, stirring the surface soil also. A light dusting of soot will be beneficial in warding off small slugs. Give the plants under glass plenty of air in favourable weather.

BROCCOLI.—Forward plants of winter Broccoli may be lifted and planted in pits or some place where they can be tem-

porarily covered from the effects of heavy damp and stiff frost. Those with heads now three inches or more across are worth preserving.

CHICORY.—Strong roots of Chicory will readily force in a temperature of 55deg. Plant a number in deep pots, surrounding with soil, and give a watering. Invert a pot over, and place in a warm cellar. Boxes deep enough to hold the roots will do equally well. Growth must be made, however, in absolute darkness, so that it may be in a properly blanched state, when it is excellent for salads.

HORSERADISH.—A portion of the Horseradish quarter should be trenched up, taking out the whole of the roots, both large and small. A selection may then be made from these for culinary use, and planting purposes to form new beds. The thick, strong roots are, of course, the best for use, while the more slender with good crowns attached may be placed on one side for spring planting.

FORMING MUSHROOM BEDS.—Manure for Mushroom beds should be fresh horse droppings from which the fiery heat has been expelled; then, in a nice condition as regards moisture, being neither wet nor dry, form into a bed, which may be 3ft or 4ft wide and not less than 6ft long and 1ft deep. Place the manure in layers and make firm. This may be done with the fork or gentle treading with the feet.

SPAWNING MUSHROOM BEDS.—Should the manure not be likely to become excessively hot, the spawn may be inserted immediately after the bed is formed. Obtain bricks of healthy spawn, and break into pieces the size of walnuts or rather larger. Place these firmly in the manure about an inch below the surface. Then surface with an inch of good, fresh, loamy soil; beat firm and level, and smooth with the back of the spade. The surface of the bed should be covered with a layer of hay, and a temperature of 50deg maintained in the structure.—EAST KENT.

Weather Notes.

Weather in Perthshire.

Frosts varying from 2deg to 9deg have been intermittent during all the past month, but not till the 26th ult. did winter appear to settle down upon us. On the 27th snow was general over the country, from 2in to 5in being reported. All the hills are still covered in a greater or less degree. The partial thaw that occurred on the 28th was followed by 5deg of frost on Sunday morning, and 13deg were registered on the 30th. On Monday everything looked like a continued spell of wintry weather.—B D., S. Perthshire.

Temple House Gardens, Great Marlow, Bucks.

The rainfall here for November, 1903, was 1.93; the maximum temperature 55deg on the 9th, and the minimum 24deg on the 19th. There were 8 foggy mornings, viz., on the 4th, 5th, 6th, 7th, 8th, 9th, and 15th, and a foggy day with misty rain on the 11th. The maximum temperature for November, 1902, was 58deg on the 12th, and the minimum 24deg on the 20th. The rainfall for November, 1902, was 2.15in. The river Thames is rising rapidly again.—G. G., December 1.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
November.										
Sunday ...22	W.S.W.	deg. 46.9	deg. 43.7	deg. 53.3	deg. 43.5	Ins. 0.02	deg. 45.2	deg. 47.7	deg. 51.0	deg. 34.5
Monday ...23	W.S.W.	50.0	48.2	54.2	46.7	—	46.4	47.9	50.8	39.3
Tuesday ...24	W.N.W.	52.7	51.2	50.7	49.8	0.04	47.9	43.2	50.5	39.3
Wed'sday 25	S.W.	37.0	35.5	47.5	31.5	—	45.4	48.4	50.5	23.0
Thursday 26	W.N.W.	41.5	38.3	48.8	36.8	0.02	44.4	48.0	50.5	30.3
Friday ...27	S.W.	47.7	46.7	50.3	38.9	0.72	44.7	47.5	50.4	34.5
Saturday 28	W.S.W.	43.5	42.4	46.3	42.2	0.35	45.7	47.5	50.4	41.3
MEANS ...		45.6	43.7	50.2	41.3	Total. 1.15	45.7	47.9	50.6	34.6

The weather for the past week has been dull and wet.



** All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.

SCHEDULE RECEIVED (H. A. A.).—We thank you for the schedule of the Aberystwith Show.

APPLE TREES CANKERED (J. H.).—We are obliged by your letter and enclosures, which shall have our attention. The question for you to determine is this, Are the insects the cause of the canker or the result of it? This you can determine by experiment. Your theory is not new. As regards hundreds of trees and thousands of cases of canker that we have examined, we indicated the cause to be a fungoid infestation.

BOOK ON HEATING (A. L.).—You will find the book on "Heating by Hot Water," by Walter Jones, which has ninety-six illustrations, and the second edition of which was published in 1894 by Crosby, Lockwood and Son, 7, Stationers' Hall Court, Ludgate Hill, London, a useful book. The price is 2s. 6d. net.

CYPRIPEDIUM LEAF INJURED (L. T. K.).—Two causes may have contributed to the rusty appearance of the foliage—first, the employment of water containing some injurious substance, and placing the plants in too low a temperature. The former is probably the chief cause, as the injury seems to be confined to the lower portions of the leaf where the water would accumulate in the axils. Rain water is the best, and very little will be needed on the foliage at this time of year. The temperature should not be less than 55deg, and a shady position is preferable for most Cypripediums, as for other Orchids which do not possess pseudo-bulbs.

CULTURE OF HELLEBORES (H. T. H.).—A deep, fertile, rather strong, yet porous soil is enjoyed by these plants, and a position shaded from the mid-day sun. For choice we prefer a border that is shaded by a wall or distant trees at mid-day. It is important, too, that the roots be not spread out near the surface, but as far as possible they should be made to point directly downwards, the same as Carrots. This hint we had from a person who grew these in plants by the acre and sold the flowers in thousands. In growing the plants in pots, place them in a compost of good loam with a little decayed manure and wood ashes added. Plunge the pots over their rims in a partially shaded position in your garden, and water the plants liberally during dry weather, giving them weak liquid manure occasionally when they are in full growth. The morning sun and afternoon shade appear to suit them admirably. The foliage should be well sprinkled, and the ground surrounding the plants be made moist during the evenings of sultry days in summer. A good time for dividing and planting is immediately after flowering.

GLADIOLUS DISEASED (S. R., Brummagem).—The leaves are infected by a species of Heterosporium, probably *H. gracile*, though the fruits are not very distinct, the black mould not being yet fully developed, and the corms are slightly affected by a fungus which forms black crustaceous patches on the outer sheaths, and the hyphae gradually extending to every part. It is called the bulb scab (*Mystrosporium adustum*). The corms also swarm with black slugs, these probably accounting for the destruction of the tender roots, and to some extent for the dying back of the foliage and very indifferent formation of the young corms.

Probably the wet weather has favoured the fungi and certainly the slugs. The ground should be given a good dressing of quicklime, slaked with the smallest quantity of water necessary to cause it to fall into an apparently dry powder, and the plants may be sprayed with ammoniacal carbonate of copper solution. The season, however, is so far advanced that there is little prospect of the plants forming good corms. The tops should be burned when died down, and the worst or dead parts now cut off and destroyed by fire. Before planting the corms, they, when only slightly attacked by the scab, should be soaked for two hours in a solution of one part formalin to three hundred parts water, so as to destroy the fungus before it enters the deeper parts of the corm. The thing, however, is to get rid of the slugs, as there can be no good root formation whilst these pests exist. The dressings of lime should be repeated occasionally.

MOVING RHODODENDRONS (J. N., Meath).—No shrubs transplant better than these, and they may be had from a nursery any time from October until the buds commence swelling in the spring. They may be dispatched safely at this season of the year, provided the roots are kept quite moist in transit.

SEVENTY-FOUR DESSERT PEARS ON THE QUINCE (Alpha).—Doyenné d'Été (d.g.), Beurré Giffard, Jargonelle (d.g.), Souvenir du Congrès (d.g.), Clapp's Favourite (d.g.), Petite Marguerite, Williams' Bon Chrétien, Buerré d'Amanlis, Madame Treyve, Triomphe de Vienne (d.g.), Beurré Superfin, Fondante d'Automne, Marguerite Marrillat, Beurré Martillet (d.g.), Beurré Hardy, Conference, Louise Bonne of Jersey, Gansel's Bergamot (d.g.), Magnate, Beurré d'Avalon, Benrré Alexandre, Lucas, Belle Julie, Directeur Hardy, Thompson's (d.g.), Seckle (d.g.), Comte de Lamy (d.g.), Pitmaston Duchess, Brown Beurré (d.g.), Doyenné Boussoch, Marie Louise (d.g.), Marie Louise d'Uccle, Beurré Fouqueray, President d'Osmonville, Emile d'Heyst, Beurré Bosc (d.g.), Baronne de Mello, Durondeau, Beurré Jean Van Geert, Conseiller de la Cour, Comte de Flandre (d.g.), Princess, Fondante Thriot, Duchess d'Angoulême, Hacon's Incomparable, Beurré Baltet Père, Doyenné du Comice, Knight's Monarch (d.g.), Crasanne (d.g.), Van Mons Léon Leclerc (d.g.), Buerré Diel, Forelle (d.g.), Huyshe's Prince Consort, Huyshe's Prince of Wales (d.g.), Doyenné Defays, Buerré Berkman (d.g.), Beurré Bachelier, Winter Nelis, Beurré d'Arenberg, Glou Morceau, Bergamotte Dussart, Beurré d'Anjou, Passe Colmar, President Barrabie, Beurré de Jonghe, Jean de Witte (d.g.), Josephine de Malines (d.g.), Easter Beurré Nouvelle Fulvie, Marie Benoist (d.g.), Olivier de Serres, Passe Crasanne (d.g.), Beurré Rance (d.g.), Bergamot Esperen. The letters d.g. are for double-grafted on the Quince. The trees should be planted 2ft apart for single diagonal cordons, and be trained at an angle of 45deg. The best aspect for Pears is west. We have, however, found them succeed well against walls with east, and even south, aspects.

DEPRESSING VINE RODS (F. J.).—It is not "always" necessary to depress Vine rods to secure an even break. We have Vines, not forced, that have not been "depressed" for twenty years, and the rods in the great vinery at Chiswick remain trained up to the roof constantly. When Vines are forced into growth early they generally break more regularly when trained horizontally for a time. The sap has a natural tendency to move directly upwards, hence the disposition of the buds near the top of a Vine to start first, and this is further induced by the house in which they are trained being warmer at the top than at the base of the rafters in the absence of special care in ventilation. The branches of trees on walls are more or less depressed except in the case of vertical cordons, and these, as a rule, are not so well furnished with healthy spurs at the base as nearer the top, the growth of diagonal cordons being more uniform from base to summit because of the depression. The buds at the base of your Raspberry canes that are trained upright to stakes do not push so quickly, grow so strongly, nor bear such fine fruit as those near the top of the canes; and similarly, if your Roses make strong shoots, 4ft or more long in the summer, and these are neither depressed nor shortened, many of the lower buds will remain dormant; but if you peg the long shoots down the bursting of the buds will be far more uniform. If your Vines break regularly without bending down the rods let them alone; but if they start at the top first, the lower buds remaining dormant, you will find the advantage of depression.

RIVER BANKS BROKEN DOWN.—The following query and reply we cull from the "N.B. Agriculturist": I have about fifty acres protected by embankment from the river, but the embankment is in considerable danger of being broken at the upper end, and in that case the whole fifty acres will be under water. I have several times advised the proprietor of the danger, but it looks as if nothing is to be done; and, as failing this, the river will undoubtedly break in this winter, I would like to know what my position would then be. Sixty acres of land would be lost, and, I presume, I would be entitled to reduction of rent; but how would I stand in regard to the manures and seeds I have put into the sixty acres? I have broken up and renewed the most of this, and sown down in Timothy. Being heavy land, my work, which has been considerable, besides my outlay, would be lost. Your advice in the matter will be much appreciated. Can I compel proprietor to carry out such work as would ensure safety of embankment? I presume not.—HUNTER. [You cannot compel the proprietor to take due measures for the protection of the embankment, but in the event of the river breaking its banks and rendering useless the sixty acres of haugh land referred to, you would be entitled to withhold the rent of said land, on the ground that you had been deprived of the proper use of part of the subject let to you. The serious damage caused last year by flooding and the bursting of river embankments has led the tenants of river-side lands to realise the necessity of securing in their leases better provision for their protection against such damage.]

"TUBERS" ON CUCUMBER PLANT ROOTS (C. S.).—The swellings on the roots and root-stem are caused by eelworm, evidently the root-knot eelworm (*Heterodera radicola*). A fuller reply will be given next week.

STORING CACTUS DAHLIA ROOTS FOR THE WINTER (R. B.).—The proper procedure is to allow the roots to remain in the ground until the tops are destroyed by frost, when they should be cut down to within 6in of the ground, and afterwards lifted. Remove as much soil as possible with a pointed stick, not damaging the fleshy, tuber-like roots, attach the label of each to the stem, and store away in a cool, frost-proof, rather dry place. Looking over occasionally to remove any part of the roots that may be damping, is all that is required until starting or planting again in the following spring. The roots you have taken up and placed in a box will keep sound enough exposed if the place they are placed in is not very dry, say a cellar; but if the storing place is very arid, the roots are better covered with rather dry soil, yet keeping the collar or base of the stem clear, where the eyes or buds are that will start into growth at the proper time, only just covering the fleshy roots. This prevents excessive evaporation and the shrivelling of the fleshy roots. The cooler the roots are kept the better, only frost must be excluded.

NAMES OF PLANTS.—*Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number.*—(Clucs).—In its present condition, and without some information about it, we do not recognise the specimen. (A. F.).—1, *Peristrophe speciosa*; 2, *Erica gracilis*; 3, *Pelargonium tomentosum*.



General Buildings of the Farm.

Since the days of Mr. Pecksniff, the world has seen architects of all sorts and kinds, and although some may be termed cosmopolitan, there are others who take up distinct lines and follow them out. For instance, we do not suppose that the great ecclesiastical architects of the day would care to trouble themselves much with municipal buildings, or the design for a railway station. If they condescend to a school (National Society), a church institute, or a vicarage, that is about all the digression they make; and of course they are justified in so doing; every man to his trade. In like manner the designer of Queen Anne or Georgian dwelling-houses, has a mind above anything so homely as stables or cow sheds, and if he did undertake such work, it is quite possible the buildings erected would not be very suitable to the purpose for which they were needed.

It is supposed that land agents, stewards, and the like have a workable knowledge of the requirements in the way of buildings for the several estates or farms under their management. As young men, they are expected to take a short period of training in some architect's office to get the requisite knowledge of measurements, dimensions, and costs; that is, cost of raw material and of skilled labour for erection. A good many of these men are poorly equipped for their work, or at least we must suppose so, for we have seen money wasted in large sums upon unnecessary, incommensurate, and ill-adapted buildings; and again we have seen a poor farmer absolutely without proper shelter for stock, or his manifold implements, which rapidly deteriorate when left exposed to the elements.

In the first instance, where too much money has been spent "not wisely, but too well," the landlord is crippled at the time, and constantly has a feud in course of time with "repairs," which he either leaves undone, or does with much grumbling in a very perfunctory manner; and the "smart" buildings in time get a very unkempt, neglected look. We remember a model farm standing where some of the doors were made wide enough to admit of a man with a forkful of straw on his back, and where, over the draught horse stables, were "chambers," braided and furnished in a far better style than the bedrooms of the cottages on the same farm. Our opinion is that an intelligent farmer is a far better hand at planning farm buildings than any professional. He will contrive them so as to have a maximum of shelter and a minimum of work. It is merely a matter of arrangement; and we will warrant he does not spend much money.

We hear about farms in a ring "fence." Before beginning to build, the site should be carefully considered. A good water supply is the first desideratum, not only for the house, but also for the yards; for much expense may be quickly entailed if a special water supply has to be arranged for. The buildings should be easy of access, near or upon a good, well-metalled public road. (We have not much faith in the farmer as a road-maker; it is one of the things that is always put off till a more convenient season—which never comes). There is enough labour on a farm without increasing it by road-making, which requires heavy draught; and here, in passing, we would just say how well these motor cultivators get over some, or many, of the occupation roads, especially on strong, land farms. They will have to be specially constructed: big, heavy, very strong, and thus in a measure they will defeat their own ends.

The soil for the site should be dry, easy of drainage, with a slope to the south. Warmth is one of the first desiderata, and hence all yards where cattle are kept should get as much sun as possible. If the yards are covered (which we hope is the case on most farms now) the southern side may well be left open. Yards covered with wooden roofs are by no means expensive, while as to their value—well, nobody but a poor farmer who has struggled on for years before getting one, can tell.

We sometimes wish the cattle could give us their experience. To lie warm and dry is half the battle; nothing does well in cold, sodden yards, for so much food is used up in supplying bodily heat before any can be apportioned for feeding purposes. On every farm there should be a goodly supply of loose boxes. This, especially, should there be no covered yard. Any animal requiring extra care or extra food will be enabled to have this if put up into a loose box. Indeed, it is difficult to know how they can well be dispensed with. Cows at calving time, mares and foals, young stock, ailing stock—for these, nothing beats a loose box. A loose box affords a certain amount of exercise, and we ourselves know the comfort of being able to lie, stand, or sit as we list.

We have often referred to the value of straw; and for storing straw, either fresh from the machine or chaffed, there is no place like the big, wide old barns that our forefathers affected. We don't need them now for threshing purposes; the days of the flail are over; but they do conduce to the careful saving of fodder. At one end of the barn will most probably be found the pulper, so that rations of chaffed straw and reduced roots can be easily mixed. In all cases it is well to consider the convenience of the yard man. He should have his stores of food and bedding handy. Winter days are short, and he has a good bit of work to put in between sun and sun. No, that will hardly do, for much of his work is done by lantern light. Where a large dairy herd is kept, any system that facilitates a regular and good water supply is most essential.

As cows yield so much better when warmly housed, it is not a bad plan to have the granary over the cow-house; thus a double purpose is effected. The warmth from the cows will assist materially in getting and keeping grain in good condition. Heat rises, and it is wonderful how much heat cows will generate. Warmth is necessary for stock, but ventilation is even more so. It is so difficult to steer clear of the two extremes, but it has to be done, if buildings are to be sanitary and wholesome.

Anyone who has had to do with pigs will know what restless, tiresome animals they are. They are never contented unless they can root up the floor of their abode, and being strong they are usually most successful in their efforts. One part of the sty should present, if possible, an even surface, and nothing makes better flooring than old railway sleepers set on edge. These are strong and long: they are heavy; and well packed in it will require a particularly clever and energetic pig to up-root them. Concrete floors for pig-sties are of little use. They soon become broken somewhere. A weak place shows, and then it is merely a question of time. There is nothing more difficult to keep in order than the causeway running along boxes or sheds opening into a yard where pigs lie; and have it up, sooner or later, they will. The cost of sleepers is about two shillings each.

Never forget the value of light. So often we find it blocked out, as though it were a deadly ill instead of being the greatest gift of God. A well-lighted building shows up dirt, and awakens a feeling of shame, or should do so, in the attendant. At any rate, it is more easy to remove dirt seen than unseen. It is quite possible to be over-burdened with buildings, but this is not often the complaint.

A few farms have Dutch barns attached. What a saving of labour and expense it would be if they were general! Covered yards and Dutch barns would do more to help farmers in their

difficulties than motor power, wonderful and useful as that promises to be.

On farms that lie wide, it is imperative to have sheds and yards out in some of the far distant fields, and here again railway sleepers come in very useful, and at the same time they are inexpensive. There is no need for anything very elaborate: shelter and a place where some straw can be turned into manure, and this in proximity to arable fields that need it—that is all.

We should like to add a few words as to the construction of the foreman's house, especially that, where farm servants are boarded. Whatever else is done or undone, there should be a great, good, and well-warmed kitchen to serve for meals and also as a cheerful sitting-room in the evenings. Scores of lads turn out into the streets because there is not adequate room for them and the foreman's family in the small apartment designed by the architect, who is hardly up to the requirements of the case. The men's bedchamber should be equally large and airy, with a separate staircase, and there should be at least one small room that might serve in cases of sickness.

Work on the Home Farm.

After writing in a doleful strain for weeks, it is pleasant to chronicle something satisfactory. Up to the time of writing there has been no rain for more than a week, but drying winds instead, and we, as well as our neighbours, were able to plough again, and what is more, make really good work. It is a curious fact that the most satisfactory work is performed by ploughing a fair depth. The top 3 in or 4 in only represent the mud; the lower strata are comparatively dry. After being ploughed and allowed a day or two to dry, an excellent seed-bed is obtained. Some Wheat is being ploughed in, but a good portion is drilled, and the shortage in the 1904 Wheat acreage will not be so very serious after all.

We are sorry to say that the persistent way in which the farmers of this part (Hull) have threshed Barley, combined with the very excellent yield, have quite overdone our markets. The trade has had more Barley than it could digest, and forced sales are now made at considerable sacrifice. We must give our customers a rest. We hear a good deal now about heated lots, and fear we may hear more before spring. We shall have to be very careful in purchasing seed parcels.

Until now there has been no time to think of planting out August-sown Cabbages. The time is very late, but if the weather should keep mild and dry a little longer, the planting might yet be done. Finer crops may certainly be grown by autumn than by spring planting, though where rabbits and hares are numerous the plants are more easily protected from them in the restricted space of a seed-bed during the winter. The finer weather has postponed the manuring of seeds, but it is work that can wait.

Good beef is decidedly dearer, and store cattle firmer in price. Sheep also are very firm. What a demand for both there would have been if farmers had been flush of money! We are glad to see that the scarcity of that article is being recognised by wholesale remissions or postponements of rent in many quarters. Both cattle and sheep are doing well. A serious question to many sufferers by bad harvest weather is that of buying cakes or similar foods when they have so much unsaleable grain on hand. The situation has already had a depressing effect on the cake market, and it will be worse if farmers choose to use barleymeal as a cheap substitute. We question the wisdom of using Barley for sheep unless it is cheaper than cake. Barleymeal for cattle is a different matter, and in case of a permanent or secure tenancy we would certainly make free use of it.

WEBB AND SONS' STAND AT THE BIRMINGHAM CATTLE SHOW.—Messrs. Webb and Sons, the King's seedsmen, Wordsley, Stourbridge, occupied a position in the show, and made a most imposing display of Swedes, Mangolds, Turnips, &c., worthy of their reputation. The specimens shown are selected mostly from the crops which have secured champion honours in the principal open competitions of the kingdom, including the recent great London Dairy Show, where most important prizes for roots were awarded to the produce of Webbs' seeds, viz.: 1st prize, Webbs' Imperial Swede, 61 entries; 1st, 2nd, and 3rd prizes, Webbs' Mammoth Long Red Mangold, 12 entries; 1st prize, Webbs' Smithfield Yellow Globe Mangold, 37 entries. Webbs' seeds invariably prove successful in the principal open competitions, amongst a few of their latest successes being six 1st and other prizes at London, 31 1st and other prizes at Cardiff (including the special champion prize), 10 1st and other prizes at Norwich, 33 1st and other prizes at Liverpool, 27 1st and other prizes at Cheltenham, 11 1st and other prizes at Gloucester, and many valuable 1st and other prizes, medals, &c., at the Brewers' Exhibition, London, held last October. At Birmingham the produce of Webbs' seeds secured the majority of the honours, viz., 22 1st and other prizes.

PLANTING SEASON



PAULS' ROYAL NURSERIES

WALTHAM CROSS, HERTS.

12 miles from London. South Entrance four minutes' walk from Waltham Cross Station; West Entrance three minutes' walk from Theobald's Grove; both Stations on the Great Eastern Railway.

SPECIALITIES:

ROSES in all forms, from open ground and in pots. Gold Medals in 1903 from Royal Horticultural and Royal Botanic Societies.

FRUIT TREES for the Orchard, Garden, and Forcing House. Hogg Memorial Medal, 1901.

HARDY TREES for Streets, Parks, and General Planting. Silver Medal from Royal Agricultural Society of England.

SHRUBS, both Evergreen and Deciduous.

CLIMBING PLANTS, Hardy and Greenhouse.

RHODODENDRONS, CAMELLIAS, & AZALEAS.

HERBACEOUS PLANTS in great variety.

BULBS and SEEDS, and all Garden Sundries.

PRICE LISTS ON APPLICATION. INSPECTION INVITED. Upwards of 1000 Medals, Prizes, and other Awards at leading Exhibitions during the past 42 years.

SOLE POSTAL ADDRESS—

WM. PAUL & SON,

WALTHAM CROSS, HERTS.

Rose Growers by Appointment to His Majesty the King.

BORDER CARNATIONS.

STRONG HARDY PLANTS TO OFFER. The following 12 choice varieties, 6/-; 2 dozen, 11/-; 4 dozen, 20/-; carriage paid for cash:—Pink Beauty, Hon. Adele Hamilton (rose pink), Keith (white), Miss A. Campbell (yellow), Jim Highgate (crimson), Peggie (fancy), Polly Aitken (light-pink), Jessie Stevenson (scarlet), Snowball (white), Bethia Campbell (deep rose), Mrs. Collins Wood (terra cotta), Duchess of Fife (clear rose). Priced List of over 200 varieties free on application.—**M. CAMPBELL & SONS**, Nurserymen, High Blantyre, N.B.

GRAPE VINES in POTS

Extra Strong Fruiting and Planting Canes in all Leading Varieties.

FIGS IN POTS

All Leading Sorts.

Bushes and Fan-trained for Walls.

DICKSONS Nurseries CHESTER

1500,000 BULBS.

Spanish Iris, Yellow, White, and Blue	7/6 per 1000.
Crocus, all colors	5/6 per 1000.
Sir Watkin Narcissus	5/6 per 100.
Horsefieldii	5/6 per 100.
Trumpet Narcissus	7/6 per 1000.
Glory of Leiden Narcissus	6d. each.
Madam de Graaff	3/6 each.
Sweet Scented Pheasant Eye Narcissus	5/6 & 7/6 per 1000.
Mixed Narcissus	5/6 per 1000.
Double Daffodils	5/6 & 10/6 per 1000.
Tulips, Mixed (choice)	2/6 per 100.
Single Lent Lilies	3/6 per 1000.
Snowdrops	5/6 & 7/6 per 1000.
Strawberry Plants	1/6 per 100.

SEND FOR LISTS BEFORE ORDERING ELSEWHERE.

Cross & Son, Nurseries, Wisbech.

CLIBRANS

HARDY FRUIT.

WE make a speciality of the cultivation of trees and bushes for fruit production. Our soil and situation is favourable to the development of well-matured growth and an abundance of healthy roots.

APPLES, in choice variety, Standards and Pyramids, 1/6 to 3/6 each; 15/- to 43/- per dozen. Dwarf, Horizontal, and Fan-trained, 2/6 to 5/- each. Cordons, 1/6 to 2/6.

PEARS, all the best varieties, Standards and Pyramids, 1/6 to 3/6 each; 18/- to 38/- per dozen. Dwarf, Horizontal, and Fan-trained, 2/6 to 5/- each. Cordons, 1/6 to 3/6 each.

PLUMS, all good fruiting sorts, Standards and pyramids, 1/6 to 3/6 each. Dwarf, Fan-trained, 2/6 to 5/- each.

APRICOTS, splendid plants, in superb health, Dwarf-trained, 5/- and 7/6 each. Standard and half-standard trained, 7/6 to 15/- each.

BLACKBERRIES, 6d. to 9d. each; 4/6 to 8/- per dozen.

CHERRIES, in fine variety, Pyramid and Standard, 1/6 to 3/6. Dwarf Fan-trained, 2/6 to 5/- each.

CURRENTS, Red, Black, and White-fruited varieties, in choice sorts, 2/6 to 4/6 per dozen.

GOOSEBERRIES, fine fruiting varieties, 2/6 to 6/- per dozen.

LOGANBERRY, strong plants, 1/6 each; 12/- per dozen.

MEDLARS, Pyramids and Standards, 2/6 and 3/6 each.

NECTARINES and PEACHES, grand plants, in splendid condition, Dwarf Fan trained 5/- to 10/6 each. Standard and Half-standard trained, 7/6 to 15/- each.

RASPBERRIES, strong, well-rooted canes, in variety, 2/6 and 3/6 per dozen.

STRAWBERRIES, Prepared Runners from Open Ground, 3/- per 100. Runners in pots, 12/6 per 100. Extra strong, in 5in. pots, 4/- and 6/- per dozen.

SEND FOR LIST.

SELECT ROSES.

OUR ROSES, grown in a cool northern climate, invariably give the utmost satisfaction to purchasers. We make Rose-growing a special feature.

Dwarf Hybrid Perpetuals, in choice variety, 6/- to 9/- per doz., 40/- to 65/- per 100. Extra strong, in pots for forcing, 1/6 to 3/6 each, 15/- to 36/- per doz.

Moss Roses, in lovely variety, 6/- per doz., 45/- per 100.

Teas and Hybrid Teas, in choice and beautiful sorts, 10/- to 12/- per doz. In pots, 15/- per doz.

Noisettes, in finest variety, 10/- and 12/- per doz.

China Roses, in select sorts, 6/- to 12/- per doz.

Polyantha Roses, from 9/- per doz.

China and Bourbon Hybrids, in fine variety, 6/- doz.

Climbing Roses, in fine variety, 9/- to 12/- per doz.

Penzance Briars, a comparatively new, but very beautiful class of Rose, 9/- to 15/- per doz.

Above prices are for our selection only, and are carriage paid to customers' nearest railway station.

ROSES IN POTS.

We have a very special line in T. and H.T. Roses in 7in. pots, with shoots 8 to 12ft. in length; strong, healthy, and well-ripened, at 2/6, 3/6 and 5/- each.

FORCING ROOTS.

RHUBARB, the best sorts—

Strong roots 6/- and 9/- per doz

Extra large and strong roots

for forcing 12/- and 18/- per doz

SEAKALE, for planting 7/6 per 100

Extra strong for forcing 16/- per 100

Extra-extra strong for forcing 21/- per 100

ASPARAGUS, for planting 3/6 and 5/- per 100

Strong planting 7/6 and 10/6 per 100

Extra strong for forcing 15/- and 17/6 per 100

A COMPLETE LIST of all the Choicest Trees, Shrubs, Conifers, Roses, Climbing Plants, &c., is contained in

OUR TREE AND SHRUB LIST,

GRATIS AND POST FREE.

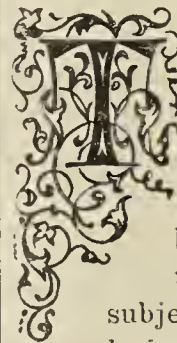
ALTRINCHAM & MANCHESTER



Journal of Horticulture.

THURSDAY, DECEMBER 10, 1903.

The Value of Herbaceous Plants.



THE more we see of gardens, large or small, the more we are impressed with the great worth of herbaceous plants for beautifying beds, borders and shrubberies as compared to a sole use of the ordinary summer flowering subjects, such as Pelargoniums, Calceolarias, Stocks, and various foliage plants.

It is also astounding to see how little these valuable subjects are utilised in gardens of great area. Even when an attempt at employment is made, we cannot but conclude, from the results seen, that those in charge are lamentably ignorant of the variety and extent of this section at command, and at an extremely low rate of value.

There is not the slightest excuse in these days of low prices, when hardy plants can be purchased quite cheaply, for the miserable collections one sees in gardens in every county. When will gardeners generally wake up to the value of these plants, and to a sensible method of growing them? It is to be feared that the scarcity of hardy plants is more due to a want of knowledge, not only of their use, but of the actual variety at command.

So many gardeners are so wrapped up in plants that require glass protection that the difficulty is to get them to think of anything else. We do not intend here to give a list of plants available at various seasons of the year, although it is necessary. Our aim is rather to draw the attention of prominent gardeners to their lack of employment of these useful subjects. Of course we are met with the argument that we cannot grow hardy plants: we want flower at a particular season, say during August, September, and October, and to do this we must grow many annuals. Granted that annuals, employed judiciously, do give a wealth of flowers, yet hardy plants, if properly selected,

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

give equal floral results and have more varied growth, and certainly entail less labour. For instance, what annual can give equal results with herbaceous Phloxes properly selected and cultivated? Yet how often do we see, in nine out of every ten gardens of pretension, more than half a dozen miserably cultivated examples, whereas quite two dozen varieties, covering a wide range of colour and height, would make an interesting display, and certainly would give the blaze of colour required—bright or subdued.

Take, again, the family of Rudbeckias for September and October flowering. *R. Newmani* as a dwarf plant cannot be excelled for freedom of flower and an effective colour as well. Then we have such varieties as *R. nitida*, *R. Golden Glow*, from 6 feet to 7 feet in height if required; *R. maxima*, with its glaucous foliage, and the pale tinted form of *R. pinnata*, not forgetting *R. fulgida*, which flowers quite late in the autumn, not forgetting the simple forms. *Helianthus* also provide us with great variety in double and single flowers of varying heights, and certainly this is a free-flowering family. *Tritomas* give a wealth of colour which all admire. The variety in colour covers so wide a range that the wonder is that more are not grown.

For September and October employment what plant can equal Michaelmas Daisies? These, carefully selected, harmonise well with other subjects. Someone says "Oh, but Asters take up so much space." Not at all; a single growth taken off a desirable variety in March, or even April, will grow into a handsome plant for the purpose named if the right sorts are selected. If, however, we grow only the older fashioned, stiff-growing sorts with no side growths, but a cluster of flower at the apex, then certainly these plants are not suitable; but when we have a wealth of variety such as is evidenced in such as *The Hon. Edith Gibbs*, or many more of *Mr. Beckett's* seedlings, which grow into handsome specimens in one season all from one stem, the conditions are quite altered.

Pentstemons, although they do not strictly come under the heading of hardy plants, are not nearly enough recognised. No plant will give such a wealth of flower from early July until November, and quite irrespective of the weather. Even in such a year as the present the Pentstemons are quite unaffected. There they were, a mass of flowers, and with a minimum of care expended. The range of colour, form and habit, too, is quite under control with the extensive variety at hand; those who grow the small flowered sorts have but themselves to blame.—E. MOLYNEUX.

Vegetable Pathogene.

Eelworm in Cucumbers.

In reply to "C. S." the Stem Eelworm (*Tylenchus devastatrix*), and the Root-stem Eelworm (*T. obtusus*), both produce knots in the roots and swellings on the root-stems. Whether *Heterodera* or *Tylenchus*, they, in egg and young, or so-called larval stage (not distinguishable) pass into the soil or surrounding material, and, unless reached and destroyed, are almost sure to attack the follow-on plants. Every particle of soil, therefore, should be cleared out, and the beds and walls drenched with a 1 per cent. solution of formaldehyde (1lb formaldehyde to 10 gallons of water), which will certainly kill every nematode reached.

It is a good plan to sprinkle the whole of the house before commencing to take out the diseased plants, and remove the old soil with the formaldehyde solution, so that any vermatodes falling on the floor or other parts may receive quietus, and after all is cleared out drench the beds, walls, and floors. The plants removed should be burned; or, better, be at once immersed in the formaldehyde solution as carefully taken from the soil; while the soil removed should be placed in an area large enough to hold it, about a foot thick, that has been sprinkled with the formaldehyde solution, and the soil ought to be at once treated with the solution all over, applying by means of a rose watering can.

In the course of a few weeks the house may again be used for growing Cucumbers. If the solution has reached all the larval eelworms there will not be any recurrence, only care is taken not to introduce them in the soil. This is best effected by the good old plan of stacking the turves forming the staple of Cucumber compost for a time until the herbage and roots are destroyed, not allowing any vegetation to exist on the stacked turves. If the turf must be used recently cut, it should be heated or steamed, not over 212deg and preferably not more than to 180deg, a temperature of 125deg sufficing to kill eelworms. Or spread thinly and water with the formaldehyde solution, and in the course of a month or six weeks the turf may be used for

the Cucumbers without prejudice, meanwhile turning once a week. The bottom heat has nothing to do with the eelworm, certainly not cause of the "tubers" on the roots. The eelworm is the sole cause, and has been either introduced in the soil or by some other agency.—G. A.

National Economics.

There are about 230,000 acres reputed under top fruit in these islands. Now, what it behoves us to do is to cultivate the odd thirty thousand acres and lay the axe to the roots of the mostly worthless remainder. Then we should replant with bush grown Apple trees on newly selected, good climatic sites, such as may be in actual occupation, say one thousand acres out of every thirty thousand. Endless acres of the latter go begging for want of the national recognition of the true needs of fruit growing, which should be adapted to the climate.

How very different would have been the issue for the nation had a leader like Gladstone possessed a smattering of natural sciences instead of a perfunctory Greek erudition on which his vastly greater contemporary—our unapproached and, alas! unappreciated Huxley—so strenuously endeavoured to fix the nation's mind! His endeavour was defeated against its own deepest material interest by the greater national tribute uncritically bestowed and laid lavishly at the feet of an incomprehensible Gladstone, who, in turn, comprehended not this nation's destiny. Had the latter had any true communion with Nature, had he only studied Nature, our great mother Nature, on Sundays when all profane literature was banished from his surroundings, how differently would Great Britain be situated actually. Beyond jam-factories, I am not aware of any practicable proposals on his part in the whole of the interests of the organic kingdom.

Thus it was ordained by the nation's own short-sighted choice, that alone the inorganic kingdom should reign supreme; our mineral resources wastefully exploited to the utter discomfiture of the infinitely greater organic kingdom, capable of adequately producing our staff of life. Judicious legislation could transform our pseudo-cultivation into a thing of life, and enable us to assert our greater national independence by means of it.

One million sterling annually, to the true practical and sympathetic education of the farmer, or, rather, the farmer's son, during all those years of two full generations that the inertia of ignorance was thrown into one scale, the inorganic would have paid the British nation magnificently. Such education should have begun in the very year of the repeal of the Corn Laws. Yet a challenge was recklessly thrown to the world to do its worst, and was accepted. The effects have become relentlessly manifest.

The clear reasoning powers possessed by the British nation, and manifested on emergencies, should, at this hour, be concentrated on a struggle for that pre-eminence which seems to be fading away. An inquiry as to what are our national needs and what form to give them finds the latter confusingly interpreted (largely for purposes outside their true bearing). Lord Rosebery referred to the problem quite lately, but whether he stands on the adequately advanced threshold was not apparent. Huxley is the man to advise us: natural sciences and Nature—the study of these is needed, for from them all the rest depends. The need for more intense cultivation of every acre in these islands appeals forcibly to our common sense. Intense cultivation, supported by adequate fiscal and economic legislation, is the true bedrock on which to build up and conserve what past inattention has jeopardised. The absence of any truly national economic newspaper causes me to attempt to open up the subject for editorial treatment and discussion in your columns, especially as your weekly column on "The Home Farm," which I usually read with much interest, points the way to the suggestion being naturally evolved. The most paying crop from every acre in these islands is to be insured literally from our watersheds to the seashore, and why exclude the farming of the sea itself, seeing that the State has amalgamated the Departments of Agriculture and Fisheries? This amalgamation dates from the time of the lamented late Mr. Hanbury.

Intense cultivation of the soil is the province of the gardener, the market gardener, and the fruit grower; and their spirit should be assimilated by our agriculturists, who are, in these precious little Isles, the only adequate solution of the question of the "Food Supply in War Time."

When once the duty of our Government in this direction will have been recognised, and legislative enactments are promoted which directly aid the development of that highest cultivation, and which in its final issues a generation hence will provide our first line of defence, revolution in British thought will be recorded.

Such a transformation ought also to ensure considerable national savings in the Army and Navy services, which ought to

be transferred for the maintenance of that higher intensity of cultivation and crop-production destined to suffice for double our present numerical population by the end of the present century. All sections of cultivators of the soil should arise—the arable, the pastoral, the market gardener, the fruit grower, the owner of or cultivator of large estates and small.

We cannot include the forester, for, alas! there are no forests as yet on a whole third of our entire insular surface. Here is a waste of sunshine and rain alike, and with them near fifty million sterling annually (!) for the indulgence in this national *laissez-faire*; that conscious submission of "intelligent" man to crude evolution, unassisted, paying abroad over twenty million sterling annually for hardy timber, and losing to our potential population an equal amount of wages in its production. All those above named (the would-be forester included) should prepare and combine to give utterance to their long suspended claim to be heard.

Thus your columns would only fulfil a natural function of great potentiality in the furtherance of the true interests of the nation, by making the aspects known to those unacquainted with, as well as to those really interested, the question, and who may have under-valued the force of union which triumphs so strikingly in little Belgium.

"L'union fait la force!" Every holder and every cultivator of an acre in these Islands should combine for the efficient representation of the interests of agriculture in its widest sense. I hope that the *Journal of Horticulture*, amidst much gardening, will nevertheless give voice to the need for greater consideration of this greatest of all the industries. The most precious heritage of the British nation is its soil.

The vast results arising from the influence of men and measures on a nation's development, should indeed be enough to crystallise attention on the present issue developing before the nation.

The new departure in Nature Study as part of the education of the young is quite after Huxley's own heart's desire. Nature study, which, enlarged, means geography and physiography, is the bedrock of all sound national economic knowledge and experience, and will again engender prosperity in its wake. Professor Dewar told his audience at the meeting of the British Association at Belfast a year ago that it would take this nation sixty years to arrive abreast in training where the German nation stands now. My rejoinder is that, with Nature Study to develop faculties of observation—a spirit of inventiveness and resource will be evolved from a thoroughly organised national system on Huxley's lines that will at that distance leave all other nations behind, unless the same course be adopted in order to remain a match for us. [Nature Study, that is, natural history, is taught liberally throughout Germany.—ED.] Thus much I venture to prophesy, but all depends upon the earnestness of the sympathetic trained teacher.

When our daughter dependencies see our destiny is being accomplished on lines here adumbrated, they will need no persuasion or any agitation as now progressing at home. They will acclaim, of their own accord, that the time has come, because the motherland is awake! This is the interpretation I place on the late Lord Salisbury's last platform utterance, in May, 1902, on this pregnant problem.—H. H. RASCHEN, Sidcup, Nov. 29, 1903.

National Roads.

We learn that a great scheme of National Roads to serve the immensely-increased and rapidly-increasing road traffic of the United Kingdom may be brought before Parliament as a result of the inquiry just concluded by a Departmental Committee appointed by the President of the Local Government Board. This Committee, of which Mr. J. G. Lawson, M.P., was chairman, will, it is understood, make some striking recommendations in its report with regard to the construction and maintenance of roads, but none more interesting than that the great roads—such as the North Road or the Bath Road—should be taken over by a new department of the Local Government Board and improved and maintained by the State. There is at present an almost Chinese jumble in the distribution of authority over roads in England and Wales. There are in London alone twenty-nine highway authorities, and 1,855 throughout the rest of the country. It is understood that it will propose that all the chief roads in a county shall be placed under newly-constituted county highway boards, to which county boroughs shall have the option of entrusting through routes in their boroughs. This is what France has already done, for the Paris roads come under the Seine department. These county authorities should have power to compulsorily acquire land for road improvements. One of the witnesses before the Committee, Mr. Moncur, chief surveyor of Staffordshire, is understood to have given a sketch of a scheme for special side tracks for motor traffic along roads in the country, with bridges or short tunnels at junction points. To meet the cost he suggested an annual tax of £10 on motor-cars and 10s. on bicycles.

Trees and Shrubs.

Olearias.

No better shrubs for planting in town gardens or on dry-land places, can be chosen than *Olearia Haasti*. Plant it where you will, it seems to flourish and produce masses of its white, Daisy-like flowers. The plants may be placed 2ft to 3ft apart where close groups are desired, and it is frequently planted in such a fashion as this, or for covert-belts in the more forward parts of outlying grounds, yet this is perhaps putting it to too mean a use. The species *stellata* (syn. *Eurybia Gunni*) is not generally so utilisable, but the starry flowers are more beautiful than those of the former. It is well worthy of pot culture. *O. macrodonta* (*O. dentata*) is the largest species, and furnishes a handsome dwarf foliage shrub.—F.

White Pine as a Shelter Tree.

That the branches of the White Pine are apt to snap in severe storms when trees are old is well known, and this fact sometimes deters one from planting the tree. But this snapping does not occur to any great extent when the trees are young, the branches being more flexible. This should be remembered in connection with its use as a wind-break or shelter-affording tree, for which purpose but few evergreens are its equal. In the most exposed places it stands better than almost any other tree. The reason is to be found in the soft needles it possesses. These suffer but little in gales of cold wind, as they give to the gale, instead of standing rigid and combating the wind as does the Norway Spruce, for example. By a little pruning of side branches when young, the White Pine can be made a bushy tree.

Veronicas.

There are three principal groups of these flowers for the garden—the shrubby kinds from New Zealand, the tall or long-spiked European and American Veronicas, and last and least the tiny creeping herbs, found in many places of the world. The fairest of the latter is the little Germander Speedwell, the prettiest of native blue flowers, the Forget-me-not excepted. There is a variegated form of the plant, but like the variegated Strawberry, and many other streaked leaves, it is apt to revert again to green. But the normal wild plant is prettier than any of its exceptional forms.

There are several creeping Veronicas quite worth a garden place, and none better could be chosen than *V. Teucrium* or *V. rupestris*, as it is sometimes sold under. Carpets of these spread on a dry, hungry soil, and are masses of colour during July. There is a little Veronica that is sometimes used for covering plots in cemeteries. It is *V. repens*, a plant much like a reduced Creeping Jenny in appearance, but with pale blue flowers. The plant has much less claims to a place than has *V. Teucrium*, for it suggests in appearance one of the Veronicas found in this country as a weed. The increase of these small plants must be more than whispered of. They are only small in stature, for, spreading and rooting every month, they will choke any small thing near. That is why the finest plant of this section, *V. Teucrium*, or *V. rupestris*, is safer in a border that does not favour luxurious plants. It is a fine subject for a roof garden, as illustrated in the last volume of this Journal, and is nowhere better than when strayed on to a gravel path. If the borders of a garden were edged with the variety of plants put forward for this purpose at some time or another, the result would be of a truly mixed style, for almost each plant would be of a different kind. Yet good edgings made of living materials are not common, and tiled and other devices are often preferable. One of the best plants to form an ornamental edging with is the golden green *V. cupressoides variabilis*. The typical *V. cupressoides* is not so useful, as its foliage is green, whereas the former is very effective in colouring, especially during winter. It is very compact and dwarf in habit, and has leaves as much unlike a usual shrubby Veronica as could well be. So like the Cupressus or Retinosporas is this and other similar Veronicas, that for a time they were supposed to be such. The structure of their wood reveals their true character, as also do their flowers, but in this group of queer leaved kinds, these are not freely produced by young plants, and often not by old. They are usually small and white in colour.

One of the most useful of robust shrubby Veronicas is the willow-leaved, *V. salicifolia*, often literally covered with short spikes of pale purplish fragrant flowers. No Veronica seeds so freely, or is better adapted for shrubbery planting, or in plantations with Mahonia. To reach its best condition it should be grown in an isolated bed, where its evergreen foliage is ever attractive. The leaves of *V. Bidwilli* are small and in keeping with the plant, for the flowers only rise about 6in above the ground. It is one of the latest flowering plants: commencing in July, it continues until severe frosts occur.—D. S. FISH (in "Agricultural Economist.")



***Lælia anceps* Oweniana.**

This received A.M., R.H.S., 1902. The sepals and petals are brilliant rose, paler at base, with white patches. Lip, rich magenta, the yellowish throat being streaked with the same colour. It was shown by Mr. Owen, Selwood, Rotherham.

***Vanda cristata* and *V. Denisoniana*.**

In *Vanda cristata* we have a very peculiar species, the construction of the lip being very singular. It is triangular with a three-lobed tip, yellow, with blood-red streaks. The outer segments are narrow and greenish-yellow. It thrives with *V. cærulea*. A chaste and lovely plant is *V. Denisoniana*, a stout grower, bearing pure white blossoms, which is rather rare in Vandas. It is a native of high altitudes on the Arracan Mountains, and enjoys a cool, moist régime all the year round.

Vanda Hookeriana

is a tall, scrambling species, with cylindrical leaves and short spike of flower. These are very beautiful; the sepals and petals whitish, with spots of purple; the lip purple, with crowded spots of a deeper hue. No one should attempt the culture of this species who has not ample heat at command. It grows in sweltering heat and moisture, and except for a week or two after being planted should be fully exposed to the sun's rays. In many collections it is the custom to cut the stems into lengths, and plant these in beds of sphagnum in a house fully exposed to the sun. A luxuriant growth and abundant supply of flower is thereby assured.—B. G.

***Lælia anceps*.**

The flowering period of this, the most beautiful of winter blooming Lælias, is at hand, and although the growing season has not been what one would call favourable to its success, yet we are assured of a good supply of blooms. Those who, perchance, live in the neighbourhood of foggy towns are generally precluded from growing it, or give up the idea altogether, because of the risk incurred of losing the bloom by a visitation of the fog fiend. Yet I think it is worth all the risk, for what is more beautiful or useful at this time of year than a display of *Lælia anceps* in bloom? Those who have the good fortune to live in rural districts and who grow them in quantity know full well their value. There is everything to recommend them in all collections; the flowers will last from a month to six weeks in beauty; we get a variety of colours, ranging from deep purple to pure white; they have fair size; and, lastly, they are by no means difficult plants to grow successfully.

Where a large quantity are grown, a house, or part of it, is generally devoted to them. In the former case the necessary cultural details can be applied to better advantage. There are several important cultural details to be remembered attending their success, but the difficulty is to know when and how to provide these various conditions to advantage. Therefore a few remarks on the most essential points will not be out of place.

Firstly, they require plenty of light. This is necessary all the year round, whilst in summer only enough shade is required to prevent the sun burning the foliage. Secondly, plenty of fresh air. This also at all times of the year, night and day, less, of course, in cold, windy weather. In summer, however, if occupying a house by themselves give more at night than day. Thirdly, watering. Water must be given sparingly when the plants start into growth, increasing the quantity as the growth advances and the bulb begins to show.

As the spikes begin to push rapidly a good supply is required, and on no consideration should they be allowed to shrivel at any time. In summer, on warm afternoons, we give our plants a thorough spray overhead, the results of which are always beneficial. When the flowering period is past, and until growth commences, they should be given a rest in a minimum winter temperature of 55deg, withholding water so long as the pseudo-bulbs remain plump. When in flower, however, a temperature of 60deg will be found the most suitable.

The time for repotting must be decided by each grower, but undoubtedly the best time is when root action takes place, and not before. A suitable compost will be found in good fibrous peat and sphagnum moss, using Bracken rhizomes for drainage instead of crocks. Perforated pans are preferable to baskets, these being much neater and more easily potted when occasion demands. Overgrown specimens should have their projecting leads cut off with three or four bulbs attached, thus leaving the original plant in its receptacle to develop growths from dormant buds, which, if in good condition, does not take long to accomplish, as very often strong leads will form the first year and produce flower spikes. This is a very successful way of increasing one's stock of good varieties. With the severed pieces another specimen can be made up, arranging the growing points

inwards, so that disturbance will not be again necessary for a few years.

Place pieces of charcoal and turfy peat firmly amongst the roots, finishing off by inserting alternately lumps of peat and clumps of picked heads of sphagnum moss. Plants that have to be repotted require little water at the roots for some time afterwards, beyond an occasional spray overhead on bright days. Amongst the best known white varieties may be mentioned: *L. a. Schröderiana*, *L. a. Sanderiana*, *L. a. Bull's alba*, *L. a. Hilli*, *L. a. Williamsi*, *L. a. Stella*, *L. a. Hollidayana*, *L. a. Dawsoni*; and among the many dark forms, *L. a. Chamberlainiana*, *L. a. Crawshayana*, *L. a. Amesiae*, *L. a. Percivaliana*, *L. a. Measuresiana*, *L. a. Ballentineana* and *L. a. Protheroeiana*.—J. MACKAY, Highbury.

Cultural Notes: *Dendrobiums* and *Odontoglossums*.

The autumn flowering *Odontoglossums* of the grande and Insleayi types have sometimes a little lee-way to make up with their growth after the flowers are past, and where this is necessary a little extra warmth and moisture should be allowed. Sometimes, too, the roots may be moving, and a little top-dressing of the compost may be needed. But after the growth is properly made up, these *Odontoglossums* like a much more decided period of rest than those of the crispum and similar types. The drying of the roots must not go to the length of shrivelling the pseudo-bulbs, or weakness will be caused.

O. citrosum, on the other hand, has to be thoroughly dried to ensure its flowering, and any shrivelling of the pseudo-bulbs that takes place in winter is soon picked up again in spring, when the moisture supply is again freely given. There are many of the short-bulbed sections, such as *O. Cervantesi*, *O. Rossi*, and even *O. nævium*, that must not be dried although at rest, for the small pseudo-bulbs cannot stand the strain, while *O. luteo-purpureum*, *O. Halli*, *O. triumphans*, *O. Pescatorei*, *O. Andersonianum*, and *O. cirrhosum* will, many of them, be both growing and rooting now, and consequently must be kept moist.

The earlier batch of *Dendrobiums* will usually contain specimens of *D. aureum*, *D. nobile* and the hybrids, having one or both of these well-known species as parents. Avoid over-moistening, in the atmosphere more especially, as this will lead to many of the nodes producing growths instead of flowers. *D. nobile*, *D. crassinode*, *D. Wardianum* and *D. Endocharis* are especially prone to this mishap, and many plants have been spoilt for the season by these means. With the later plants there is not so much danger, though even here a dry, warm air, with hardly any root moisture, is essential.

D. moschatum rarely ripens its growth of the present year thoroughly; but all the same a rest is needed by the older stems if a good flowering return is expected. A cool vinery, or some similar structure where the specimens can obtain plenty of light, suits them now. It may be noted here that the stems of this fine *Dendrobium* go on producing flowers year after year until exhausted, so that they should not be removed. *D. Dalhousianum* is like it in the latter respect, but is more regular in its routine of growth, and usually finishes up its stems annually. *D. formosum* must be kept dry and warm, but as the leaves usually remain on through the winter, sufficient moisture to keep them fresh is necessary.—H. R. R.

Book Notices.

The Journal of the Royal Horticultural Society.

The October volume lies before us. It is a mine of pressing information on many aspects of scientific and practical gardening. One feature of these Journals of the R.H.S. is the up-to-dateness of the matter and the subjects; the writers, too, are leaders in science and in horticulture. Besides the interesting notices about the hall and the garden—notice that are of the keenest interest in these passing days—and the abstracts from current periodicals (one of the best sections of the R.H.S. Journal), there are the following papers. Fungoid pests of the garden, in which Dr. M. C. Cooke deals with over eighty diseases of fruits, alphabetically arranged. Besides woodcuts and half-tone illustrations, these diseases have three coloured plates, on which are figured forty-two subjects. We think a little more space between each might be good, or divisional lines might be devised. After this comes a paper on the use of ether and chloroform for forcing shrubs, which brings the discoveries and experiments with these anæsthetics up to date.

There is a growing knowledge and interest in the lesser-known trees and shrubs, and both Mr. Nicholson's paper and that by Mr. James H. Veitch (the latter describing new Chinese trees and shrubs) will be studied widely. Mr. Veitch's paper, which is well illustrated, is a grand contribution to the "Journal" (R.H.S.). Prof. G. Henslow goes into Darwin's natural selection v. adaptation, in his usual able and attractive style; while, in his paper, "The Blue Nymphæas," Mr. J. Hudson, of Gunnersbury House Garden, gives the gardener some cultural hints.

Every paper is of high value. We have read Mr. Bentley's remarks on the Show Tulip with eagerness, but alas! the Show

Tulip is so difficult to make perfect that it will always be left to the devoted few. Then, what more interesting to Imperialists (as all of us ought to be) than Mr. Pickstone's paper, given before the Horticultural Club, and printed here, on "Fruit Culture at the Cape?" It is readable from end to end, and supplies a host of facts. And to the would-be emigrant or young man bent on going abroad, what more cheering than the message given in Mr. Hunt's paper entitled, "Horticulture in New Zealand?"—namely, "A hearty British welcome awaits the new settler." Mr. Hunt says: "What New Zealand wants is strong, hardy young men for country life, who will help to break down and bring the bush into cultivation . . . ; and as there is a surplus of young gardeners at home (so it is said), what better move than to make a healthy home in "Britain of the Southern Seas?"

Daffodil enthusiasts are under a debt of gratitude to Mr. W. Bartholomew for his painstaking researches into the rooting of the Narcissus. He has gone minutely, patiently, and persistently into the rooting propensities (or lack of them), in a large number of Daffodils, showing by text and photo how long this or that variety was ere it began to root in the soil, how many and how strong were those roots, and other facts about them. Happily Daffodil growers will appreciate these interesting tabulations, and that is sufficient. We might ask, Could not many other amateurs with leisure and means, add profitably to their own and others' knowledge by experiments with other plants? Great things arise from small beginnings.

Bottling fruit is not forgotten, and Miss Edith Bradley, whose bottled fruit beat that of Austin and Co. (trade suppliers) this year, explains her process. There are other papers of value, and the volume, like the others before it, is well worth a guinea, though only ten shillings is charged. But we may again point out to the many practical gardeners who are readers of the *Journal of Horticulture*, and who have not yet become Fellows of the National Society—the R.H.S.—that here is a cheap and easy means of getting a library together:—pay one guinea to become a Fellow, and you receive a quarterly *Journal*, which is a mine of information, put in a convenient and permanent form. Under gardeners also may join. The Secretary's address is 117, Victoria Street, Westminster, S.W.

Various Publications.

THE MANURING OF MARKET GARDEN CROPS.—This is a fairly elaborate essay by Bernard Dyer, D.Sc., and F. W. E. Shrivell, on Manuring. It is reprinted from the *Journal of the Royal Horticultural Society*, and costs 1s., post free, from Vinton & Co., Ltd., 9, New Bridge Street, Ludgate Circus, E.C. Various kitchen garden and fruit crops, and the manures for them, are discussed seriatim. The book is illustrated. Size 5½ in. × 8½ in., pp. 120.

THE FARMER'S BUSINESS HAND BOOK.—The price of this work is 4s. 6d., from Macmillan & Co., Ltd. It is one of the Rural Science Series, of which L. H. Bailey is the general editor. The author in this case is Isaac Phillips Roberts, Prof. of Agriculture in Cornell University, and though, of course, written specially for American farmers, the hints on how to keep accounts, the kinds of accounts, the ledger, the trial balance, accounts with particular fields and crops, &c., &c. It is a very useful companion, indeed a farmer's business book. Size, 7 in. by 5 in. Pp. 300, with a good index.

PACKING AND SELLING FRUIT AND VEGETABLES.—A very interesting, useful, and complete illustrated essay, by R. Lewis Castle, a well-known horticulturist. This was written for the Fruiterers' Company, and won their gold medal prize. It is now published in convenient book form of over 140 pages, about 8 in. by 6 in., by Messrs. Collingridge, Aldersgate Street; 1s. 2½d., post free. It is practical.

PICTORIAL PRACTICAL BULB GROWING.—Mr. Walter P. Wright has produced a series of shilling books dealing with various garden departments. This illustrated book (pp. 152; Cassell and Co.) treats also of Cannas, Dahlias, Begonias, besides true bulbous genera.

Notes on Hardy Plants.

Anemone alpina and its variety *sulphurea*.

The genus *Anemone* is one of the most attractive of the many beautiful genera which combine to give our gardens their highest attractions. It comprises many of our most delightful flowers, and it may safely be said that there are few members of the genus which do not commend themselves to the lover of flowers. Some are of comparatively tall stature, while others, typified by such plants as *A. nemorosa*, our common Wood Anemone, are flowers of lowly mien, yet of high beauty in our eyes.

Among the most pleasing of the taller *Anemones* which can be used with profit in borders and in rockeries alike, we must place the beautiful *Anemone alpina*, with its form *sulphurea*, frequently considered to be a distinct species, but placed by the best of present authorities of the day as a variety only of *A. alpina*. Both of these are very beautiful flowers, with finely divided and elegant foliage, from which arise on tallish stems pretty flat cup or saucer-like blossoms of considerable size.

Anemone alpina is widely distributed, and is said to occur in the Caucasus and in North America, as well as being plentiful in the European Alps on snowy ranges, and on the lower mountains and the slopes of the valleys. In its stature it varies greatly according to its position, the character of the soil, and the amount of moisture available for the plant in its growing season. From four or five inches to between two and three feet may seem a wide range of stature, but this is found in this Alpine *Anemone* in the various places where it grows in a wild state. It is not very fastidious, yet many seem to fail with it, though it will thrive as well in the border as anywhere, making a pretty effect with its white flowers deeply tinged with blue on the outside. Following the flowers come the round heads of silken-awned seeds, which are very ornamental for a long time after the plant has finished its flowering, which begins in the end of April or early in May.

Of equal value is the variety *sulphurea*, whose flowers are, however,

of a pale, sulphur yellow, of an unobtrusive but pleasing hue. It corresponds otherwise to the typical *Anemone alpina*, so that one need not burden these notes with further detail. It may be said, however, that while *A. alpina* has its habitats in calcareous soils, *sulphurea* is found on a granite formation. This may be of service to some who have had difficulty in growing these *Anemones*, but it may also be of some assistance to say that I have found no difficulty in cultivating *A. a. sulphurea* in soil in which there is a good deal of calcareous matter. As has been previously remarked, *A. alpina* will thrive well in the open border, and the finest display of plants of the type I have yet seen were plants raised from seeds, and growing in an open bed of cool soil in a nursery in a cold locality.

The easiest method of raising a stock of *A. alpina* is by means of seeds, which are best sown whenever properly ripe. An established plant will soon give plenty of seeds, and these are best sown in a cold frame, pricking out the young plants in favourable weather when they have attained sufficient size to handle. A mass or groups of the Alpine *Anemone* in a large rock-garden or in the "Wild Garden" is a sight worth seeing, but there are few places in this country where it can be met with. That there are not many is

much to the loss of those who have plenty of room for such a display, but who have not gone to the trouble of securing it. To the many, however, one or a few plants can be recommended as aiding the interest and attraction of any garden of hardy flowers.—S. ARNOTT.

MR. PETER BARR.—The veteran seedsman and florist sails this week for Cairo. He intends to visit Egypt, Palestine, and Greece, returning in May or June next year.



Lælia anceps Oweniana.



Successful Varieties.

It is seldom we find all varieties of Japanese succeed in the same season, even given an equal start in growth and date of introduction. A variety that was almost universally successful last season may not be seen once this year in its proper form. Why, it is difficult to say. Some peculiarity about the constitution in conjunction with certain kinds of weather at a particular stage, may account for such discrepancies as bad colour, want of perfect development of the petals, as also colour. Again, a variety may not this season be anything like the size in diameter and depth that it naturally reaches when the season is suitable for this particular kind.

Those who have not the opportunity of seeing the leading shows in various counties are no doubt interested in knowing what varieties are "doing well," as the phrase goes. For their benefit I have jotted down a few of the leading varieties I can recommend this season. At the same time I purpose naming a few of the non-successful.

F. S. Vallis is the flower of the year without a doubt. The blooms are massive, splendidly built-up in the centre; the long florets have a graceful droop which is at once elegant, besides the colour is all that one could desire—a true yellow.

Mrs. Mileham is all I said it would be when introduced a couple of seasons ago—an improved Mrs. Barkley. The florets reflex naturally, showing freely that lovely deep rose colour. The blooms, too, are more refined than many of the huge growing varieties.

Edwin Molyneux still holds its own as the brightest coloured variety we have. It does seem strange that it is the only variety in existence now popular, that was introduced with others at the same time, seventeen years since. From the millions of seedlings there has never been one to equal it in colour, nor one just like it. [What of Alfriston?—Ed.] Henry Barnes, an Australian seedling, is the nearest approach. This has been shown well this season, but it lacks perfection in the centre of the flower. In colour it is extremely rich, having a suffusion of plum over the crimson.

Mrs. Greenfield is quite one of the best of yellow flowered varieties. The florets are broad and the blooms are compact, yet not without grace. The habit is dwarf, which is really a point in its favour.

Bessie Godfrey is quite the best of Mr. Godfrey's introductions: a full, massive flower of a soft, yet rich yellow. The florets and general character of the flower is all that one could wish for.

Sensation, with the strong dashes of bronze upon the yellow, marks this variety as a true sensation.

Nellie Pockett and its yellow sport, Mrs. T. W. Pockett, are so consistent in their manner of growth and production that they are indispensable as cut blooms. In addition they are most suitable for specimen plant growth or for "bush" training.

Miss Elsie Fulton maintains its position as the best flower in the Japanese incurved section. The massive petals are sufficiently tight to render it solid, yet beautiful.

Mdme. Paolo Radaelli was this season quite at its best. Generally it is of huge size, with loosely incurving florets, and of a pleasing shade of pink. In some few instances nearly white flowers have been seen, but this is more a question of culture than fault in the variety.

General Hutton (bronze yellow) is well worthy of its place amongst a select list of Japanese; and Mrs. George Lawrence, with its somewhat narrow florets of yellow, splashed and striped with crimson, is a distinct gain.

Mafeking Hero has rendered good service to several exhibitors, its bright red colour being conspicuous anywhere. Godfrey's King, too, is another of huge size, with a tendency to be incurving. It is bright chestnut red on the reverse side, dull crimson on the surface. Australian Gold, seldom heard of nowadays, was marvellously well shown at Cardiff, and in that condition is one of the best yellow flowered varieties we have. Duchess of Sutherland is extremely rich in colour and of full size. Lord Ludlow is still quite one of the best of bronze yellows: its long drooping florets give grace and fulness to the flowers.

George Penford (crimson scarlet) is occasionally found in good order. The Rev. W. Wilks (deep rose) has been magnificently shown on several occasions. Mrs. H. Emmerton, deep canary yellow, a well built flower, is fine. Mrs. Thorneycroft, apricot, flushed orange, is handsome in every way. Sir H.

Kitchener, with its soft cream suffusion over a rich terra cotta base, is handsome: a full desirable flower.

Henry Perkins, rich yellow, overlaid with chestnut crimson, is a striking variety. Miss Mildred Ware, terra cotta-rose, over amber, is a full, medium-sized bloom. It has, however, one fault—going over in colour quickly.

NON-SUCCESSFUL VARIETIES.

No one will dispute that we have seen the best of the Carnot family. For the last three years the blooms have been growing less. We see diameter even now, but we do not get the depth or width of petal that characterised this family, and, like all other hard-worked varieties, its constitution is gone.

W. R. Church has not been consistent this season, and hardly a single perfect bloom has been seen. In colour there is a distinct tinge of green at the tips of the florets, exhibiting a want of finish in development.

Mrs. Barkley is another failure. The blooms have been large enough in width, but the florets have lacked regularity as well as vigour. Where the blooms were perfect in outline they were small. Florence Molyneux is quite a failure.

S. T. Wright, from which we expected so much at the end of last year, has been so short in its florets as to be unrecognisable. Calvet's '99 appears to have lost its delicate tint of colour, as well as richness of petal.

Charles Davis has been but once presented in its true character; Vivian Morel and Lady Hanham, not at all.

Godfrey's Masterpiece, Godfrey's Pride, Godfrey's Triumph, and Exmouth Rival are all too small for up-to-date exhibitors.

Guy Hamilton is now too full of quill petals to be of value.

Mrs. J. Lewis is much too short in floret to be graceful or even large enough. Mdme. Herwege is fast following in the same manner. A similar remark applies to M. Louis Remy and Le Grand Dragon. The moment the constitution fails shortness of petal follows.

J. R. Upton has lost that rich tint of yellow that once was its charm. Queen Alexandra is too short in floret to be of service. It is an attempt at reflexing, as well as incurving in the same flower, which is generally a failure.

Lily Mountford has lost that pretty tint of rose colour on the white. Lord Salisbury has lost the crimson that alone rendered its colour desirable.

Mdme. Philip Rivoire is a good "decorative," but nothing more. Mdme. R. Cadbury, with all its elegance of petal, is a thing of the past. Madame Von Andre and its parent are now quite useless [?]. Miss E. Pilkington is a good, late flowering variety, but of no value to an exhibitor.

Mrs. H. Weeks, which had such a run but a few years since, I hardly ever see mentioned now. Mrs. Clayton, its parent Mrs. C. H. Payne, and its sports, are all varieties of the past. Critics have now ceased to argue about T. Carrington and its co-flower, Australie: both are giving way to more recent introductions—Mdme. W. Rousseau and W. Duckham for example.

M. Chenon de Leché, once so popular, has about run its race. Pride of Madford, with all its brilliancy of colour, fails to maintain its footing, and Calvat's Sun is hardly destined to attain the highest pinnacle of fame, while Edith Tabor and Oceana are no more.

The hairy section are quite out of date, for the interest created in this type was but shallow. Lady Ridgeway, at one time a heroine from the Isle of Man, is not in evidence in the exhibition tent.—SADOC.

Proceedings in the U.S.A.

The second annual meeting of the Chrysanthemum Society of America was held at New York, Wednesday, November 11, with President Harrington in the chair. There was a good attendance of members, and after the delivery of the President's able address, interesting and encouraging reports were presented by the secretary and treasurer. Professor Geo. E. Stone's lecture on the "Diseases of Chrysanthemums" was well received. As a result of the President's recommendations, the committee on revising the constitution was instructed to report at the next annual convention. The annual report was ordered to be printed. It was announced that Elmer D. Smith, of Adrian, Mich., had made a complete card index of all varieties of Chrysanthemums of domestic origin or introduction from foreign sources since the year 1887, together with the name of raiser, disseminator and other descriptive notes. This is a very valuable compilation requiring much labour, and worthy of the highest appreciation by Chrysanthemum lovers. This also was ordered to be printed.

The interest in exhibition Chrysanthemums is increasing in the U.S.A. Over ten years ago they formed a National Chrysanthemum Society, being forty-seven years later than our own N.C.S. The president of the American N.C.S. for 1903-1904, is an Englishman, who, in fact, was at one time on the staff of one of the English gardening journals. Mr. Arthur Herrington, for this is he, has created a considerable reputation since he left England to manage the private and commercial gardens of H. McK. Twombly, Esq., Jersey City, N.J.; and it will be remembered by some of our readers that a few notes about him—

self and the gardens he so skilfully superintends, were printed in the issue for June 18, this year, when describing the tour of the Daffodil King. We print part of Mr. Herrington's presidential address, as follows:

"A year ago, in Chicago, in first convention assembled, we reviewed the past so far as it pertained to the work of the Chrysanthemum Society of America from its inception, took a careful survey of our position as a national society, and imbued with enthusiasm by the support accorded that meeting, resolved that its annual fixity was from henceforth an assured fact.

"The general interest in the Chrysanthemum is well sustained, and there is no apparent reason for any abatement thereof in a flower of such inherent ability.

"In this city in August, 1900, I for the first time attended a meeting of the faithful few who for a decade had held the society true to active purpose, confident in the belief that there was a need for it to be, though general apathy discouraged their efforts. The election of officers brought to me the responsibility of directing its affairs. From that moment one hope was dominant—the hope that ways and means might be found to establish a closer community of interest between the work and the workers; the hope that the society might meet in association with some important exhibition and thus better fulfil its mission. The Horticultural Society of Chicago provided the first opportunity, and its noble effort has been ably seconded by the American Institute of New York, with ten other societies co-operating.

"The record of the proceedings of the society, as published, has already been alluded to. It is a valuable compendium of information, containing that remarkably comprehensive series of papers submitted at the Chicago meeting, and which, if justly appraised, more than compensates for the cost of membership. A subject worthy of thought is how we may enhance the interest and the resultant practical value of our annual publication so as to make it sought after, to make it a means of bringing into and keeping within the fold of membership those members—and there might be hundreds of them—that are prevented or are unable to attend the annual meetings. Could we not enlarge the scope of our publication; make it a Chrysanthemum Year Book, and therein review the season of the flower, enumerate the new ones as they appear, and describe them in a few terse but readable articles that would tell more, and with better effect, than the conventional catalogue descriptions? Even work of this character is directly in line with our object, and can be better done by our society than by the average individual. We extol the fact that the literature of the Chrysanthemum surpasses that of any other flower. Do we not, then, owe it to those who shall come after that the record of our time shall be handed down complete and unimpaired? In conclusion Mr. Herrington suggested the formation of several committees for the various phases of the society's business.

The following are novelties:—Madona, exhibited by H. W. Rieman, Indianapolis, Ind.; light pink, Japanese incurved; scored, commercial scale 86 points. Golden Age, exhibited by Nathan Smith and Son, Adrian, Mich.; deep yellow, Japanese reflexed; scored, commercial sale, 86 points. Seedling No. 3, exhibited by Richard Rothe, gardener to Clay Kemble, Esq., Laverock, Pa.; white, reflex Japanese; scored, commercial scale, 84 points; exhibition scale, 84 points.

Among the modern gems in collections at New York were Violet Lady Beaumont, Wm. Duckham, Henry Barnes, Guy Hamilton, Chas. Longley, J. R. Upton, Queen Alexandra, being particularly worthy of mention. These all were sent out from English nurseries.

Incurving Japanese Varieties.

Some ten years since it could safely be said that this type of the Japanese Chrysanthemum almost had a preponderance in the number of its varieties. I allude to the days when Oceana, Robert Owen, and W. H. Lincoln were in the ascendant. Since then public taste has so favoured other types on account of their greater variety of petal, giving much more grace and less stiffness in character, that it is seldom we now see a true type of Japanese incurved. Especially is this noticeable where classes are made for this section entirely, as was the case at some few shows even during the past season.

From experience I have come to the conclusion that committees might well spend their money to greater advantage than in offering prizes at all for this section, except, of course, they stipulate that the blooms staged shall belong truly to that type. The answer from an exhibitor would naturally be, Where is the authority to define what really is a Japanese incurved? One naturally turns to the N.C.S. as a central body to clear up such points—important ones too. If such details do not come within

the province of this body, what does? is a reasonable question to ask. In the absence of such information I append a list of what I class as belonging to the Japanese-incurved section. If exhibitors would stage blooms true in character we should see this a pretty class, and one that would have some educational value also. I know it is possible at times to find blooms of some of the varieties named below that are not strictly incurving. Such blooms are not cultivated to perfection, and therefore should not be in a competing stand. What I include here are varieties that are truly incurving when presented in perfect condition.

Madame Paolo Radaelli, pale rose, tinted faintly with yellow; Nellie Pockett, white; Mrs. T. W. Pockett, rich yellow; W. Duckham, white, deeply flushed lilac, or pale mauve, an excellent variety for this section; Australie, purple rose; Duchess of Sutherland, orange yellow; Miss Elsie Fulton; Mrs. H. Weeks, pearly white, with a faint flush; Calvat's Sun, canary yellow; Hairy Wonder, bronzy buff; The Wonderful, chestnut bronze; Lady Ridgeway, salmon buff, shaded rose and gold; Mdme Ad. Chatin, white; Mdme. Waldeck Rousseau, chocolate crimson, bronze reverse; Godfrey's King, reddish crimson, golden reverse; Miss Alice Byron, white; Modesto, orange yellow; Oceana, pure yellow; N.C.S. Jubilee, deep mauve; and President.



Hardy Cyclamens.

Bevan, yellow, with rose shadings. This variety, I note, is classed as an incurved variety, but, in my opinion, its correct section is the Japanese incurving varieties.—SADOC.

The Variety Mrs. J. Dunn.

Will you kindly note that the Chrysanthemum mentioned on page 463, "Miss Ellen S. Kerr," is the same thing as Mrs. J. Dunn, which has been so well exhibited? After I had seen it, it was renamed.—H. SHOESMITH.

Hardy Cyclamens.

It would appear that hardy Cyclamens are unknown to a very large number of gardeners. This is not to be wondered at, for their claims are too little urged, their modest beauty of form is seldom illustrated in gardening papers, and, being so infrequently cultivated, young men seldom see or hear of them. Some of the species of hardy Cyclamens flower in the autumn (are flowering now), and others come forth in the spring. But their neatly clustered foliage is pretty at all times. The little corms may be planted in scattered colonies almost at any mild period of the year, and we would suggest that a few be also grown in pans for spring decoration in the conservatory. C. Coum is one of the most robust and most satisfactory for this purpose. The best position out of doors is between masses of Shield Ferns beneath Elm or other not too densely leafing trees, and a porous, yet cool, moist, humic soil is desirable. C. repandum is the most fragrant of the species. Others are Atkinsi, purple and white; Coum, light purple; europæum, reddish purple; ibericum, red; neapolitanum, red and white; hederæfolium, purple; and verum, dark red.



Large Plants of Lorraine Begonia.

In reply to J. Clues (page 511) regarding the above, I should say that plants of such dimensions as he speaks of must be grand specimens, and are certainly a record size. They beat all that we have seen exhibited at our November exhibition here in Edinburgh. I have grown them trained as pyramids on a wire trellis, in a 6in pot, quite 3ft through at the base, to over 3ft high. I have plants of this season's growth, both of Lorraine, and the white variety, Turnford Hall, about 3ft through, by fully 2ft 6in high, also in 6in pots. While discussing this, which is, in my opinion, the most beautiful of all winter-flowering plants, may I ask, Can Mr. Clues, or some other lover of this graceful subject, give its many admirers any information about how to produce large flowers, as well as large plants?—G. C., Edinburgh.

British v. Foreign Apples.

There is much truth in what your correspondent, "G. C.," says, on page 481 of the Journal, respecting imported Apples and Apples grown at home; and one has only to taste them cooked to prove that the home-grown fruits are far superior to the imported ones. Granted that the high-coloured Baldwins, and some of the other varieties sent to this country, are very pleasing to the eye, but to the taste they do not compare favourably to English-grown fruit, neither does the colour of the flesh recommend them. Taking luncheon at a friend's house a short time ago, at which Apple-tart was served as a sweet, I remarked to my friend, "These are not English Apples, are they?" The answer was, "No, they are foreign; they cost threepence per pound." And although I do not remember tasting any cooked before, I felt sure I was right in remarking they were not English. The only Apple that I know which resembles the foreigner in taste and colour of flesh, is the noble-looking variety, Lord Derby, and this I only consider a second-rate Apple. Were I planting Apples extensively, I should only plant one of this variety, although a neighbouring gardener, who presides over a nobleman's garden, thinks there is no other Apple like it. But I am inclined to think it is the appearance of the Apple only which leads him to make this remark.—R. MORSE, Bath.

The Raid Against Show Boards.

In support of what "J. D." says, page 511, I know of no action against Chrysanthemum societies (and, indeed, against any special floricultural society at whose exhibitions cut flowers are invited) so pregnant with disaster as the ill-considered proposal to abolish show boards. We have lately been treated to somewhat gushing articles in one of the gardening papers in praise of vases, and in depreciation of the show boards. Much can be said in favour of showing specimen blooms on long stems in vases, and they are most effective when the blooms are good, and they are properly staged. In reference to the last proposition, I have to state that I have attended Chrysanthemum shows during November, at which blooms were shown in vases, and they were among the worst staged subjects. Two shows in particular, which rank among the best held in the provinces, I could mention in which the vases of three blooms were crowded on dark side tables, where only a few of the front blooms could be seen. To ascertain the names of the varieties was practically impossible. One of the drawbacks of a vase class is that they monopolise so much table space when they are properly exhibited. When the class for twelve vases, of six specimen blooms in each, was introduced to the schedules of prizes of the National Chrysanthemum Society, some members of the society appeared to think me insane when I arranged that a table, 60ft in length, by 6ft in width, should contain four exhibits only, each having a run of 30ft by 3ft. And yet this proved none too much to display the contents of each vase to the best advantage. It therefore came about that three such tables, representing a superficial area of 1,080ft, had to be provided in this one class alone. At the recent exhibition of the N.C.S. at the Crystal Palace, I was unable to give each twelve vases more than 24ft by 3ft; and they did not look nearly so imposing in the restricted space. In addition, the exhibitor must either provide vases, or the society offering the prizes must do so. They are somewhat costly to buy, and most inconvenient to store on the part of the exhibitor; while if they are purchased by the society and stored, they become an expensive asset, especially with breakages and occa-

sional pilferings. Such points as these are scarcely considered by editors and writers in gardening papers, whose knowledge of the business side of flower shows is a very scanty one. What "J. D." says with regard to the necessity for providing larger prizes, and the restriction of the would-be exhibitors' radius (owing to the costliness and cumberousness of the means of conveyance) I support.

"J. D." is therefore the champion of the exhibitors of small numbers of flowers: to cripple their action as exhibitors, or to take a line which will cool their ardour as cultivators for exhibition, is a great mistake, and might seriously affect the income of a society. More attention is paid to blooms staged on show boards than on those shown in any other way, because the whole surface of the bloom is seen, and the qualities of purity, substance, colour, marking, &c., fully comprehended. Have vase classes by all means, but not to the disadvantage of the exhibitors in small classes. The entire abolition of show boards would mean, as "J. D." says, the extinction of a large number of this class of exhibitor.—R. DEAN.

The Proposed National Potato Society.

I am glad to learn from Mr. W. P. Wright, the promoter of the proposed Potato Society, that there is good reason to believe that a meeting may be held in London early after Christmas. Mr. Wright, as a County Council horticultural instructor, has naturally been anxious to secure the co-operation of instructors in the counties generally, as all these must be of necessity influential agents. The response to the invitations to the meeting recently issued seems to have been very favourable, and it is hoped that as a result it may be possible to promote a national society devoted solely to the interests of one of our most important food elements, the Potato. It is desired that beyond the holding of occasional exhibitions there should be instituted in diverse parts of the kingdom trials of Potatoes, all conducted on similar lines, and thus obtain satisfactory and conclusive evidence nationally as to the merits of any tested variety, old or new.—A. DEAN.

The National Dahlia Society.

It will surprise many readers of the *Journal of Horticulture* who have been aware that the National Dahlia Society has found, for two years at least, what seemed to be a satisfactory place for its annual exhibition under the wing of the Royal Horticultural Society, at the Drill Hall; to learn that the Dahlia Society will not carry their next show to the new Horticultural Hall in Vincent Square, but rather back to its old home at the Crystal Palace. When it is remembered that one special aim of the promoters of the new Horticultural Hall was to furnish a central home for all the special societies in horticulture (so far as possible) this refusal of the Dahlia Society to come in under its sheltering roof is disappointing.

But the Dahlia Committee are not to be held absolutely responsible for this decision. That body applied to the Council of the R.H.S. for terms as to the annual show as before, and finding these terms exceedingly onerous, also invited terms from the Crystal Palace Company, which seems to be now in a more prosperous condition financially than it was a few years since, when the Dahlia people left it. When the terms in each case were read to a full meeting of the committee recently held, it was unanimously agreed to accept those of the Palace Directors as being the more liberal. The conditions which were regarded as too onerous, offered by the Council of the R.H.S., were for a two days' show, taking all gate money, requiring that R.H.S. Fellows should compete for the Dahlia Society's prizes, and imposing on all visitors to the show, not members or Fellows, the greatly increased charge of 2s. 6d., instead of the customary nimble shilling. The R.H.S. would provide no other attraction whatever for the 2s. 6d. charge. At the Crystal Palace the charge for admission would remain at 1s. There would, as is always the case, be many extra attractions, there would be no conditions as to other exhibitors than members of the Dahlia Society. Of course the Crystal Palace people would take all gate money, but they would give the Dahlia Society a much more liberal money grant than the Council of the R.H.S. offered.

The Dahlia Committee and officers include some thirty Fellows of the R.H.S., so that the R.H.S. seems to be treating its own people very meanly. The Dahlia Committee protested that to allow Fellows of the R.H.S. to show for their prizes would weaken their own society and greatly deplete members. Also that the proposed charge of 2s. 6d. admission was prohibitory to so many lovers of the Dahlia who wished to see the show, but would not pay so large an admission fee. It was pointed out that the London Dahlia Union, which held its annual exhibition at Earl's Court, met with far more favourable terms there, and where the admission fee was but 1s., whilst other attractions were numerous than the R.H.S. offered to what was the original National Dahlia Society.

I have so far explained the reasons why the Dahlia Society returns next September to Sydenham Hill. The arrangement is, in the interests of the R.H.S., to be deplored, because it weakens at the outset the bond by which it was sought to hold to itself these special societies, and robs the Fellows of a splendid and much enjoyed exhibition of Dahlias. The proposals of the Council indicate sad lack of insight and of business qualities. There never was a time when solid business qualities in a council were more needed than now. When it is proposed to charge visitors the greatly enhanced fee of 2s. 6d. on the ground that the show furnished is so beautiful, the Council yet offer the Dahlia Society not one penny more than they did with but a shilling admission last year. That is a very inconsistent act. Practically it is proposed to flood the show with Fellows of the R.H.S., but to shut out, by a prohibitory charge, all those people devoted to the Dahlia who cannot be guinea Fellows of the R.H.S., or pay 2s. 6d. admission.

It is said that in the new Hall 2s. 6d. is to be the regular admission fee. If that be so, then must trade exhibitors, the backbone of the Society's meetings, greatly suffer, as it will tend to exclude because the charge will be held to be exorbitant to many of the traders' patrons. The R.H.S. never had to face a more critical period of its existence with its grave responsibilities than now, and anything which tends to check its popularity, or to set up the backs of myriads of supporters, would be suicidal. It is a time of all times, when everything should be done in a broad, liberal spirit, and when no effort should be wanting to induce everybody interested in horticulture to rally to its support and maintenance.—DAHLIA.

The Commercial Needs of the Empire.

We are all agreed upon the advantages of increasing the food production of the Empire, and in many minds the question arises—Can nothing be done to stimulate this most needful of all industries, apart from, or even in addition to, preferential tariffs or taxes on imported food? Could not such time as may elapse before a general appeal to the country be most profitably employed in ascertaining, through a Royal Commission composed of the best and freshest minds of the mother country, and all our dependencies, what our Imperial needs really are? Such an inquiry, under such auspices, would go far beyond any report yet brought to us by individuals or Blue-books, and provide a great mass of sterling information eminently instructive to us all. Whatever the upshot of the present controversy may be—whether we continue in the path of free trade or not—it cannot be doubted that such a fund of information collected from all the best experience of the Empire would provide a vast amount of expert knowledge that might be turned to incalculable account in the future, whatever the course of that future may be. Might not a fully representative Governmental committee also be formed to give help and counsel to our Imperial commerce? This question, among others, might well occupy the attention of a Royal Commission of Inquiry into the commercial needs of the Empire.—JAMES BLYTH, Bart., 33, Portland Place, W., November 12, 1903.

Protection of Fruit Trees.

Respecting W. J. Murphy's desire to protect his trees, why not adopt the system of the Florida Orange growers? A few years back they were visited by an extraordinary phenomenon, viz., a severe frost, and thousands of fruiting trees were ruined. Under such circumstances home growers would probably have been disheartened, but these exotic fruit growers argued that if it happened once it might occur again. Accordingly they prepared elaborate collapsible sheds, made in sections, of what they termed slats. Others prepared canvas tents, which could be erected in quick time. Large braziers for burning wood, &c., were in readiness, and every preparation was made for fighting the frost fiend, should he show signs of appearing. He did, and has done ever since, but the meteorological officers at Washington and elsewhere wire to the Florida station, and messages are at once despatched to the fruit growers. The railwaymen are made use of for the purpose, and immediately the growers get the warning up go the sheds and tents, and under these canopies, many of them of the rough and ready type, the trees are brought through safely by the aid of fires. Some of these sheds on large plantations are acres in extent, but it undoubtedly pays. Personally, I think the tent system would work well for blooming trees in this country. The pyramid trees could be covered by bell tents, composed of tiffany or calico, oiled if preferred. These tents should work on wires, so that they could be hauled up during the day to allow fertilisation. If the Florida market men can make it pay I see no reason why it should not do so here. [Except high rent and railway rates!] It is merely a case of spending a little. I do not suppose for an instant that any heat would be needed, but a few smother fires would help to take the raw edge off the atmosphere.—A. W.

Methods of Fumigation.

Seeing your remarks and reprint from a New York paper on page 482 of the Journal on the above subject, it occurred to me that a brief note as to what is being done in the Royal Botanic Gardens, Regent's Park, might not be out of place. At the present time a series of experiments with an entirely new and improved process are being carried out. Although too early for a general statement, yet its value is practically ensured, and when properly worked out on a standard basis and more generally understood, it will probably be adopted by all classes of growers. In addition to this, experiments are also being carried out with a view to ascertain a cheap and ready means of destroying insects in the soil. Considerable hopes of its success are entertained.—ELDERBERT F. HAWES.

Red Spider.

Since the discussion in these columns between myself, "H. D.," and others, some time ago, I should like to know if any *Journal* reader has experimented with XL All for the destruction of this pest? A vinery containing Muscat and Lady Downe's Seedling Grapes, among others, was again used for housing Chrysanthemums, and as green fly made its appearance on the "Muns," vaporising was resorted to. The house was carefully measured and just sufficient of the XL All was used to kill the green fly, which it did easily. But the fumes of the nicotine compound quite spoilt the foliage on the Muscat and Lady Downe's Vines. This proves once more that it is utterly impossible to vaporise these varieties of Grapes, even for green fly at killing strength, without destroying the foliage on the Vines. But "H. D." in the issue for July 10, 1902, asserts that he killed red spider on these varieties of Vines with XL All without destroying the foliage. Perhaps other readers have accomplished the same feat; but I fail to kill green fly even, without spoiling the foliage on these varieties of Grapes, and red spider is trebly harder to kill than green fly; perhaps fifty times harder.—A. JEFFERIES, Moor Hall Gardens, Essex.

The N.C.S. Catalogue.

I think it is not too much to expect from a body like that who is supposed to be at the head of the central authority on all matters relating to Chrysanthemum nomenclature that we should get a reliable, interesting, and useful catalogue after so many years of waiting. Can anyone say that the recently published supplement fulfils any one of these requirements? I think a long stretch of imagination will be necessary before I at least come to that conclusion. What are known as the Centenary and Jubilee editions were distinctly interesting inasmuch that the raiser's name is attached to the bulk of varieties, and the year of introduction also. These two items alone serve to render those publications interesting, and useful as a reference at the same time. The present issue is simply a catalogue, not one bit better nor so good than those issued by the leading vendors of the flower, and yet the charge is a high one for value obtained. I doubt if a second copy will be purchased by anyone who sees the publication. At some shows prizes are offered for varieties introduced in certain years; how can the present list be used as an authority even in so small a matter as that I would ask? The colour description too is excessively vague and misleading in many instances. At one show where I was an adjudicator a prize was offered for six Japanese yellow. Lord Ludlow was the variety in consideration for the premier award. The colour of the individual blooms were as they should be when in good condition—golden yellow, striped and margined with red—whereas the authoritative description is golden amber. The consequence was the blooms in question were passed, the variety coming under the colour description required, whereas if the catalogue in this instance was not misleading a disqualification must have followed. No tradesman's catalogue that I have seen describes this variety in the same manner as the official publication.

A few more instances will sustain my criticism of accuracy in description. For instance, Bessie Godfrey, a variety that has been seen this season in magnificent condition is described as deep cream; it is really a deep canary yellow. Lord Aldenham is described as deep crimson, whereas it is a yellow sport from Edwin Molyneux. Amongst incurved varieties irregularities are not so common. Ma Perfection is given as pearly white, tinted pink, instead of pure white.

What a meagre list of varieties is given as representing the Japanese incurved, especially as some societies encourage this section by having classes for them alone. In my opinion only those that are truly incurving under all conditions should be so classed. If this is not rigidly adhered to as the standard, how can exhibitors be expected to stage typical blooms? Calvat's '99 is not a true incurving variety, neither is Queen Alexandra, W.R. Church, Mrs. White Popham, or Exmouth Crimson.

In the section devoted to hairy varieties no less than twenty-two are named. The difficulty is to find two varieties worthy of

a place in any third rate collection, except, of course, it be where a special interest is taken in this type. It is an exception nowadays to find even one variety at an exhibition.—SADOC.

The Price of Flowers.

Referring to the touching tale under this heading (p. 522 of December 3), I am reminded of an equally true and still stranger Alpine legend. In this latter case it was a young peasant, who was swallowed up in a glacier during the honeymoon: he was only twenty at the time. Some twenty-five years after, the body was discovered by his son, who was living near with his widowed mother, and (an otherwise incredible case, the body being in perfect preservation) of a son being physically older than his father.—A. C.

Edwardes Square, Kensington.

This fine square, with other property of the Kensington family, was recently put up for sale, but the centre of the square did not sell. The London County Council is anxious to preserve this and many other squares now much in peril of being built over, but there is the money difficulty. Edwardes Square was laid out in 1819 by Aiglio, a notable Italian landscape gardener, in clumps and winding walks. Since then it has undergone some alterations. Russell Square, a still grander space, is a memorial of the work of Repton, dating from 1810, though people found fault with it as being overplanted. It was Repton who wished to lay out what is called Cadogan Gardens to represent a valley, having winding walks, sloping banks, and a small lake in the middle. At that time the place was called Sloane Square, which has caused some confusion. However, it became the nursery of Salisbury, a well-known botanist and author, and subsequently it was for many years in the hands of Tuck, who had at first the middle garden of Eaton Square. In fact, quite a number of the suburban squares have been occupied as nurseries, though at present appropriated to the residents around, or to the public generally.—J. R. S. C.

The Proposed Gardeners' Association.

All craftsmen and industrial workers must organise "for defence, not defiance," nowadays, and gentlemen's gardeners as isolated units scattered all over the length and breadth of Great Britain and Ireland are like sheep without a shepherd, and their isolation renders them defenceless against imposition of many kinds. If it be true that "union is strength" it must often follow that isolation and weakness are often, even if not always, synonymous terms. A well-organised national union or guild of British gardeners would do more than any other thing I know to encourage the progress and improvement of gardening in the British Islands.—F. W. BURBIDGE.

This is a subject which has been in the minds of many gardeners for years, and often have I conversed with others about the advisability of establishing such a guild, but I have always been met with the question, "Would such an association have any influence on our employers?" It is evident to every thinking man that any conditions which would not meet with the approval of the employers, or at least the majority of employers, would do little to mend matters. Gardening is a profession which gives no guarantee. No society can ever bring about such changes as gardeners would like to see. A boy takes a love for gardening at a very early age (such was my own case), and he becomes apprenticed. Three years' hard work, and he struggles on. Personally, I have now had eighteen years in the various departments, serving respectable periods under some of the best men in the country, particularly fruit growers, yet I stand no better a chance of securing a decent appointment than a man who serves two years in a college! A gardener is not made in two years; no, but influence does more than practical and theoretical knowledge can do. The association should make MERIT the key in recommendations. A gardener, that is, a man I would think worthy of calling a gardener, is a great reader. His calling demands information which he must obtain from several sciences: botany, chemistry, geology, physiography, and it is well to have a good sound knowledge of geography. Besides this, a good gardener is generally found capable of conversing on any subject which is claiming the attention of the public; in fact, he is a man of study. The question is, How can we, as a body, help the man who gives the best years of his life to the profession to obtain a reward in the shape of an appointment? Further, can we, by amalgamation, regulate the wages paid? The latter we can never do: the former can only be done by the help of a society like the Royal Horticultural.—W. B. ROSS.

The Uncut R.H.S. "Journal."

Sir Trevor Lawrence once said the Council had now given over the barbarous practice of cutting the edges of the Society's Journal. We Fellows, then, who wish the edges of the Society's Journal cut, are all barbarians; but, nevertheless, it is a pity that so many of us should suffer inconvenience because of the "petty sentiment" of a few, as "Chelsonian" (page 510) phrases it. Let the Council send cut edges to those who want such. This could easily be arranged.—A SCOTTISH FELLOW.

Gardeners' Proverbs.

After reading the interesting article by "J. R. S. C.," page 509, I am tempted to add some few further examples. And first I will give an enlarged version of his "Oak, Ash":

Oak before Ash,
Have a splash;
Ash before Oak,
Have a soak.

In the "Quarterly" of July, 1876, it is given as follows:

If the Oak open before the Ash
'T will be warm and dry, with good Wheat to thrash;
But if Ash leaves open before the Oak
There 'll be cold, and of rain too great a soak.
If the Oak and the Ash open nearly together,
Look out for a summer of changeable weather.

Weather maxims are almost endless; pretty well every month has one saying at least. I will not inflict all these. Three or four will suffice:

So many mists in March you see,
So many frosts in May will be.

May has not a good character:

Next comes May,
Whose withering sway
Drives all April flowers away.

Charles Lamb remarked of this month:

Unmeaning joy around appears,
And Nature smiles as though she sneers!

The Hop proverb is:

Till St. James is past and gone
There may be Hops and there may be none.

Probably drowth is better than drowning:

Drowth never bred dearth in England.
When the sand doth feed the clay,
England, woe and well-a-day!
But when the clay doth feed the sand,
Then 'tis well for Angleland.

I see Peas are alluded to. Beans have also their ka'endar:

When Elm leaves are as big as a shilling
Plant Kidney Beans, if to plant you are willing.
When Elm leaves are as big as a penny
You must plant Kidney Beans, if you mean to have any.

I will conclude with Apples, with regard to which there is a homely saying:

An Apple, an egg, and a Nut,
You may eat after a slut!

There is another, more pleasing and very ancient, attributed, I think, to Sappho, and referring to what a graceless world has called "unappropriated blessings," and describing her position:

Like a sweet Apple that hung up on high,
On the topmost twig there, under the sky—
Had the Apple gatherers then forgot?
Oh no! they saw, but could reach it not.

—A. C.

British Ferns.

The Hart's-tongue Fern, *Scolopendrium vulgare*.

In many parts of the country, especially in the Western and South-western counties, the Hart's-tongue Fern is a conspicuous feature of the wayside vegetation, its long, strap-shaped fronds projecting from the hedge-bottoms in company with the Male and Shield Ferns; or on the old walls and stone dykes we may see it in a much dwarfed state lodged in the crevices and associated with several species of the Spleenwort tribe. In the first case we may find huge plants with fronds two or more feet long, while in the second they will hardly exceed as many inches.

In this simple fact we have one of the distinguishing features of the Hart's-tongue, viz., its peculiarly accommodating nature as regards both free and restricted conditions of growth; its wall companions, the Spleenworts, we shall never find growing with it in the soil in the shady woods, nor shall we find, except in extremely rare cases, its associates of the hedgerow growing on walls. Another marked feature of the Fern is the undivided, strap-like frond, a flat blade shaped like a two-edged earing-knife, with a central rib and a stalk, the base of the blade being

shaped like the upper end of a heart. No other of our native Ferns is the least like this, all, with the exception of the little Adder's-tongue, being more or less cut into side divisions, which again are frequently sub-divided. It also bears its spores in a peculiar fashion, the long, sausage-shaped, brown heaps which we shall find on the frond backs in the autumn consisting really of two masses of spore cases, which grow together as they swell and mature.

So much for the common features of the Hart's-tongue; but what will our readers say to the assertion that as regards uncommon features, the Hart's-tongue is perhaps the most wonderful Fern in the world? Yet this is a solid fact, for, considering its normal simplicity of type, no Fern existing, whether temperate or tropical, native or exotic, has been so fantastically varied by Nature as this. Not a single character but has been altered by Nature in her sportive moods, not merely in one, but in many ways; and we would particularly impress upon our Fern-loving friends that the great bulk of these variations have been found wild in our native lanes and woods, or on the walls and dykes frequented by the common types.

A by no means uncommon feature is a division of the frond

begin to grasp the possibility of several hundred distinct varieties existing, and we also begin to comprehend the wonderful side attached to this common plant.

Variety, however, is not necessarily charming; hence we must not omit to emphasise the fact that many of these varieties are far less handsome than the common, while many of the others possess great interest as curiosities, even where tastes might differ as to grace and decorative charm. Undoubtedly the more beautiful are the frilled and the frilled-and-fringed sections (*S. v. crispum*, *S. v. c. fimbriatum*, and *S. v. c. Drummondiae superbum*).

In the *crispum* proper the fronds are not only deeply frilled, but much indented; these produce no spores, all the vigour going into frondage. There are, however, some very "frilly" fertile forms, but the spores are always produced at the expense of thoroughbred form in this section. In the fringed section, however, which has originated from two very distinct wild finds by selective culture, spores are usually produced on a limited scale.

The Stansfield *fimbriatum*s arose from a tough, wavy, fronded find (*S. v. undulatum*)—a most unlikely parent, the offspring being thin, papery, and prettily fringed on the edges; and



Study of a Formal Front.

at the top into two or more branches, and this, if all the fronds be affected, is usually a permanent sport (*S. v. lobatum*). This multiplication of the tongue-tip is a feature of fully a hundred varieties, no two of which are quite alike, while in range they vary from a mere fork, down to such a degree of forking and re-forking that the normal strap disappears entirely, and we have an apparent ball of the finest moss in its place (*S. v. densum*, Kelway).

So much for the tongue tip; now for the heart-shaped tongue base, where the stalk joins the frond; this has been lengthened into long points, and also into tasselled ones to match the tip, the frond being thus arrow-shaped, or sagittate (*S. v. sagittatum*); and not content with this in one variety (*S. v. s.*, Dadds), they grow nearly as long as the central frond itself, and turn it into a trident. The flatness of the frond disappears in numerous lovely frilled or "crispum" forms, and the smooth, plain edge is varied in many ways from saw-toothed up to lacey fringes.

Finally the smooth surface has been broken up into a rough one, more or less deeply corrugated or cut, rugose, muricate, sculpturate, or varied with marginal or internal ridges and lines. Hence we see that Nature has left no character untouched; and when we add that many forms are combinations of these variations, and also that dwarfing comes in as another variant, we

the *Drummondiae fimbriatum*s sprung from a wild find near Falmouth, and are refined editions of the parent. In these the fronds are not only frilled and fringed, but waved up and down like a switchback, while fine tassels form the frond tips. At present they are certainly an easy first among all the Hart's-tongue varieties.

For a selection we cannot do better than refer to Messrs. Stansfield's or Birkenhead's catalogues. Culture is easy. The Fern likes an open rubbly compost of loam and leaf-mould, and a little lime, with plenty of drainage; and some of the finest forms are worthy of well-lighted case or frame culture, since, though perfectly hardy, their delicacy of make is apt to suffer under open-air conditions.—CHAS. T. DRURY, V.M.H., F.L.S.

STUDY OF A FORMAL FRONT.—This is the season of planting and of alterations. Among other things, new fronts are here and there being designed, and those who have had work of this nature to do can appreciate the assistance of a pattern or suggestive model, whereby to design the features of their own areas. We do not promise that the illustration on this page will be anything more than merely suggestive to beginners; but if it supplies some guiding lines its purpose will be served.

NOTES & NOTICES

The Horticultural Club.

The next house dinner of the Club will be held on Tuesday, December 15th, at 6 p.m., at the Hotel Windsor. Mr. George Bunyard, V.M.H., has promised to read a paper, entitled "Notes on inconspicuous flowers—scented—with a view to discussion."

Mr. E. T. Gilman.

The Earl of Shrewsbury has signalled his esteem for, and confidence in, the above named well-known and excellent gardener by placing in his entire charge the extensive gardens at Ingestre, in addition to those at Alton Towers, over which Mr. Gilman has presided during the past eight years. Mr. Gilman was head gardener at Ingestre for twenty years previous to taking charge of the famous Alton Tower gardens.—J. UDALE.

The Chrysanthemum Analysis.

The Journal's Chrysanthemum Analysis is being prepared by Mr. E. Molyneux, and it may be in our hands before the end of the present month. We would add to Mr. Molyneux's private appeal to the voters, to return to him their papers as soon as they conveniently can, so that this valuable contribution may be published in seasonable time for the execution of orders by the Chrysanthemum trade growers. The analysis will be on a broader basis than heretofore.

Croydon Gardeners' Society.

This society at intervals offers prizes for essays on a given subject in horticulture, by which it hopes to create a further interest to the members in inviting them to join in friendly competition. The subject for the last competition was one on "The most economical and best method to deal with one acre of kitchen garden." The first prize-winner was Mr. A. Middleton, Coombe Lodge Gardens, and he read his winning essay before the members on Tuesday week at their rooms, Sunflower Temperance Hotel, George Street. The exhibits staged at the meeting were some specimens of three new varieties of Potatoes, viz., the celebrated "Northern Star," "Sir John Llewelyn," and "Evergood," and the thanks of the members were conveyed to Messrs. F. W. and S. Rogers, Croydon and Thornton Heath, for sending them. The fourth annual dinner of this society will be held at the Greyhound Hotel, Croydon, on Wednesday, February 10th, 1904.

Potato Growing Test in West Lothian.

Mr. A. S. R. Learmonth, Balderston Farm, Linlithgow, made a special trial of twenty-nine varieties of Potatoes this season, and the results, as under, were contributed to the "North British Agriculturist." Every precaution was adopted to ensure that each variety would obtain identical treatment. The land was ploughed in autumn, after 20 tons of dung per acre had been spread on the stubble. When planting, a dressing of artificials was applied in the drills at the rate of $7\frac{1}{2}$ cwt. per acre. The land was suitable for Potatoes, being a medium alluvial loam. Twenty running yards of each variety was planted, with sixty whole sets specially selected, to weigh about 2 oz. each. To thoroughly test the disease-resisting qualities lifting was deferred until the beginning of November. Appended are the particulars of the ten varieties which were most satisfactory:—

	Ware. Tons.	Seconds. Tons.	Chats. Tons.	Diseased. Tons.
Evergood	10 3 0	2 13 2	0 13 2	0 0 0
Farmers' Glory .. .	9 3 0	1 12 0	1 3 0	1 0 0
The Factor	9 3 0	1 1 2	0 13 2	1 3 0
British Queen .. .	7 12 0	1 9 0	0 13 2	1 7 2
Up-to-Date	8 6 0	1 4 2	1 1 2	0 7 2
Abundance (Sutton's) ..	7 9 0	1 15 0	0 7 2	1 7 2
Market Favourites ..	7 12 0	1 4 2	0 12 0	1 9 0
Main Crop	8 3 0	1 9 0	0 12 0	0 3 0
Royal Kidney	6 18 10	1 7 2	1 1 2	0 1 2
Dobbie's Improved Kidneys ..	7 9 0	0 10 2	0 10 2	0 7 2

The other varieties which were tested, and which did not give such good results as the above, were the following:—Bountiful, Britannia, Cigarette, Daniel's Special, Dobbie's Favourite, Duke of Rothesay, Jeanie Deans, Satisfaction, Scottish Triumph, Springfield, Snowflake, The Crofter, The Sirdar, White Elephant, Windsor Castle, Cramond Blossom, Pride of Enfield, and Fortyfold. One of the surprises of the trial was the position taken by Main Crop. Mr. Learmonth believes the splendid result with this variety to be largely due to the entire change of seed.

The Gardeners' Royal Benevolent Institution.

We understand that the annual festival dinner in aid of the funds of this institution will be held at the Hotel Métropole, London, in June next, when Harry J. Veitch, Esq., the treasurer, will preside, and the exact date will be announced shortly.

National Dahlia Society.

The annual general meeting of the above society will be held in the North Room, Hotel Windsor, Victoria Street, Westminster, S.W., on Tuesday, December 15th, at 3 p.m. A meeting of the committee will be held at 2 p.m.—P. W. TULLOCH, hon. sec., Sterndale, New Church Road, Hove.

Royal Horticultural Society.

The next fruit and flower show of the Royal Horticultural Society will be held on Tuesday, December 15th, in the Drill Hall, Buckingham Gate, Westminster, 1—4 p.m. The committees will meet as usual at noon. A general meeting for the election of new Fellows will take place at 3 o'clock. At a general meeting of the Society, held on Tuesday, November 24th, fifty-eight new Fellows were elected, amongst them being His Highness Prince Frederick Duleep Singh, Lady Emily Dyke, the Hon. Mrs. Cecil Bingham, the Hon. Mrs. Edward Portman, the Hon. Mrs. Henry Denison, the Hon. Mrs. E. Thesiger, the Hon. Lilian Elphinstone, and the Hon. the Minister of Agriculture for British Columbia, making a total of 1,339 new Fellows elected since the beginning of the present year.

Edinburgh Seed Trade Assistants.

On the evening of Friday, the 4th inst., in the spacious saloon of Ferguson and Forrester's Restaurant, Princes Street, the Edinburgh Seed Trade assistants held their annual dinner. Over a hundred were present, and the chair was very worthily occupied by Mr. D. W. Thomson. The tables were beautifully decorated with choice plants and cut flowers, supplied for the occasion by the leading firms in town. The meeting was a great success, and most heartily enjoyed by the large company present. After the loyal toasts, Mr. McHattie proposed the toast of "The Seed Trade Assistants," being responded to by Mr. Denholm. The toast of "The Nursery and Seed Trade" was proposed by Mr. M. Todd, florist, Edinburgh, coupled with the name of Mr. D. P. Laird, Pinkhill Nurseries. The toast was enthusiastically pledged, and Mr. Laird, in his happiest vein, returned thanks. Other toasts followed, including that of the secretary, Mr. Parker, who was warmly thanked for the pains he had taken in arranging the gathering. Songs and recitations filled up the evening till 12.30, when "Auld Lang Syne" brought the pleasant function to a close.

Presentation to Mr. R. Sydenham.

At the annual meeting of the Midland Carnation and Picotee Society, held on December 3, Mr. W. H. Parton, junr., honorary treasurer, presented, on behalf of the society, a magnificent illuminated address in album form to Mr. Robert Sydenham, as some slight recognition of his valuable services to the society during its first twelve years. The text of the address is as follows: "We, the members of the Midland Carnation and Picotee Society, desire to express our extreme regret that you have found it imperative to retire from active work in connection with our society. It was entirely through your influence that the society was founded in the year 1891, and we avail ourselves of the present opportunity of tendering to you our sincere thanks for the valuable time you have devoted, and the untiring efforts and important help you have given during the twelve years you have acted as chairman of the committee and treasurer, and which has been to so great an extent instrumental in gaining the reputation and promoting the best interests of our society. We have much pleasure in asking your acceptance of this address, together with the accompanying group of your well-wishers, as a token of our appreciation and regard, and we earnestly hope that you may be spared for many years to enjoy the respect and esteem of your numerous friends, and all those associated with you, which you have always so deservedly possessed. Birmingham, August, 1903."

It had been hoped that Professor Hillhouse would have made the presentation, but he, being confined to his room by illness, was unable to do so. The Professor, however, sent a letter expressing his regret, and wishing Mr. Sydenham health and happiness. Mr. Parton also, on behalf of the society, presented to Mr. Herbert Smith the hon. secretary, a framed copy of the photograph mentioned in the testimonial, on his retirement from the secretaryship, which he has held for the past ten years.

In Pleasant Norfolk.

DURING some recent peregrinations in Norfolk, fortunate landed us at the pleasant old-world village of Hilgay, where the conditions of life appear to approach somewhat to the "three acres and a cow" standard, judging by the number of allotments or small holdings. Here may be seen breadths of Carrots, there Potatoes, with possibly a strip of corn wedged between; here, again, Red Cabbages, and perhaps Onions. Many of the cottages are gay with flowers, Roses, Dahlias, Sweet Peas, Antirrhinums, &c., the whole giving one an idea of sweet contentment. Our business here, however, lay at

Woodhall,

a very ancient mansion, the residence of M. Stocks, Esq., who is lord of the manor, and who is well known and popular in the district. As its name implies, the estate is beautifully wooded and the Hall sheltered on all sides. It is a noble building in the Elizabethan style, and over the north front entrance are some quaint carvings and inscriptions, together with the date—1579. The south front is very pleasing, and here are some grand Wistarias, Cotoneasters, and Magnolias (the latter in flower). From here can be seen a fine stretch of park beyond the well-kept lawn; but we want to see further, and so must seek the chief of the garden, Mr. Lewendon, whom we find to be a typical gardener, busy pruning fruit trees, but ready to afford us "a look round." His staff at the time of our visit was busy with Chrysanthemums and other routine work: on every side one notices order and tidiness.

The kitchen garden is about one and a half to two acres. Late Peas were looking well, and Veitch's Autocrat, Chelsonian, Ne Plus Ultra, and Dr. McLean showed fair crops; Sutton's White Gem Celery is exceptionally good; while a good crop of Onions had just been lifted. On a border we found a remarkably fine lot of Czar and Marie Louise Violets, some being then in flower. On another border there was a fine lot of Carnations, and a batch of early flowering Chrysanthemums, including Madame Duffy and Madame Desgrange, with a profusion of flowers. A south border had a crop of Tomatoes (Frogmore Selected), the plants of which were fully 5ft to 6ft high, the fruit being of good size and well coloured. Very noticeable also was a large batch of exceptionally fine plants of Solanums, fully 2ft through, and well loaded with berries, while a fine lot of Callas also claimed attention.

On the walks there was one of the best collections of Chrysanthemums we have seen, and these were being prepared for housing. There are about 600 of them, and all the best varieties are included. Certainly they reflect credit upon the gardener. What a fine show they would make in a large span-roofed house!

Going back to the lawn we noticed some good Roses, late as it was, and here is a specimen *Aucuba* covered with berries to an extent seldom seen, some fine specimen Irish Yews, and a Pampas Grass with about fifty fine spikes, are noticeable; and in the beds are Fuchsias, Iresines, and Abutilon Boule de Neige, and other things. A border at one end was quite gay with Cactus Dahlias, Roses, *Tritoma uvaria*, with its red-hot-poker-like flowers, and a very fine lot of Antirrhinums: while some fine plants of *Laurustinus* were then full of flower.

Coming to the glass houses, we commence with the conservatory, a fine house, though rather shaded. Covering the entire roof is a *Cobæa scandens variegata*, hanging in trails and presenting quite a picture. There are some fine plants of *Phoenix reclinata*, *Latania*, *Blechnum*, *Araucaria excelsa*, *Campanula pyramidalis*, *Lilium*, &c. At one end is a rockery of tufa stones wherein Ferns are revelling. *Pteris*, *Asplenium*, *Rex Begonia*, and even Agaves seem luxuriant; and at the base is an *Adiantum*, with fronds fully 2ft long, kissing the water below. It is a noble house, and adjoins a truly handsome billiard room.

Next we visit the stove, which is a fine lean-to house about 42ft by 20ft, and here is a fine collection of plants, including *Pandanus Veitchi* (particularly good, both in style and colour), *Dracæna Jamesi*, *D. Lord Wolseley*, *Cocos Weddelliana*, *Maranta zebra*, *Alocasia*, a fine specimen of *Nephrodium Nidus*, *Peperomia*, and *Crotons* in variety, all looking well. In the Melon house the winter crop was just starting, and here were a nice lot of *Crotons*, fine young stuff of good colour, and seemingly very promising. The back wall of this house is completely covered with *Ficus repens*.

In the early vinery are such varieties as Black Hamburgh, Foster's Seedling, and Duchess of Buccleuch. The Vines, though somewhat old, are wonderfully full of vitality, the wood being hard and well ripened. The greenhouse is another good house, containing a large variety of double and semi-double *Pelargoniums*, *Begonias*, and other plants. On the roof there is a very fine *Passiflora* in flower; a *Bougainvillea glabra* with a profusion of very fine sprays, well worth photographing; a *Niphetos* Rose, nicely flowered; and then comes the late vinery, with a grand crop of Black Maroc, Black Hamburgh, Black Alicante, and Lady Downe's Grapes. There are some nice bunches of fleshy

berries, well coloured, with evident signs of careful culture. In the Peach house are the varieties Royal George, Dr. Hogg, and Gros Mignonne, with *Violette Hâtive Nectarine*. In two span-roof houses are some fine *Colons*, a fine lot of *Calanthe Veitchi* (good bulbs, showing well), *Dendrobiums*, *Cypripediums*, and *Cœlogynes*, besides *Pancreatum fragrans*. These are now almost bursting their 10in pots. In the frame-ground are *Cinerarias*, looking well; about 500 pots of Strawberries for forcing, *Primulas*, *Cyclamens*, and *Encharis amazonica*.

The hardy fruit garden (and they know how to grow fruit at Woodhall) comprises Pears, a treat to look upon, easily over a pound in weight, and not solitary ones, but quite numerous. Catillac had a fair crop, and all were good fruit, probably averaging $\frac{3}{4}$ lb, with perhaps 100 or 150 on a wall tree. Durondeau also had a fair crop of magnificent fruits. Pitmaston Duchess, Benrre Rance, Duchesse d'Angoulême, and Winter Crasanne were all good. The trees are exceedingly well trained.

Of Apples, we saw a fruit of Warner's King, which had been blown down by the wind. It was 13½in in circumference, and weighed over a pound; and we believe some fruits of this past season weighed 25oz. (It may be remembered that the late Mr. Woodcock wrote of the fruit here in the "Journal" a few years ago.) Gloria Mundi, Ribston Pippin, Kentish Fillbasket, Bramley's Seedling, Blenheim Orange, Lane's Prince Albert, Lady Henniker, Cox's Orange, and King of Pippins, all do well, and Mr. Lewendon's culture is evidently successful. Amongst the shrubs we observed Golden Elder and *Thuopsis* doing particularly well.

The gardener's house itself claimed some attention. It is a modern structure, covered with Ampelopsis, just then turning to that lovely hue that betokens the approach of autumn. It was what town folk would call a lonely situation, but pleasant withal; and its appearance was in keeping with the rest of the establishment, for everywhere tidiness and good order were apparent, and when next business takes us in the neighbourhood we hope to have the privilege of renewing the acquaintance. —ROVER.

Some Good Roses.

That our national flower is more popular than ever, is proved by the fact that each season brings us quite a large number of new varieties of exquisite shades and delicate tints, each in its way an improvement on the many beautiful sorts we possess. One often remarks, "Surely nothing more beautiful is possible?" on seeing a new introduction at one of the numerous Rose shows, only to repeat it again at a subsequent exhibition. Amongst the many superb varieties exhibited this season few can have failed to notice massive, beautifully shaped blossoms of Frau Carl Druschki. It is indeed an acquisition, and the snow-white blossoms are deserving of the popularity this Rose has gained.

Another striking flower, the magnificent silvery-white Mildred Grant and Mrs. Edw. Mawley, a deliciously scented Tea, bright carmine in colour, shaded salmon, is to be seen in nearly every collection. A beautifully coloured Tea Rose is Lady Roberts, of a rich reddish apricot, varying at times, pale orange at edge of petals, rich red copper colour at the base. Undoubtedly it will demand a foremost place, being one of those charming Roses that appeal to all tastes.

Among the many velvety-crimsons we have to select from, none, perhaps, are more worthy of first choice than Liberty, for it is perfect in form, medium size, and decided in hue. As a cut flower or for a buttonhole it will equal any other, while a good bunch is exquisite, its richness being indescribable. Bessie Brown is the best creamy white variety one could choose, and is a perfect flower. Gladys Harkness, a sweetly scented Tea Rose, very free flowering, of a deep salmon colour, should have a place, and the long pointed buds of Lady Battersea are exceedingly attractive, making a splendid buttonhole flower. Its colour is a very pleasing shade of cherry-red. For a good yellow I can recommend Souvenir de Pierre Notting, a charming soft yellow, most delicately tinted with pink. An indispensable Rose is Duchess of Portland, being one of those useful varieties suitable for all purposes. The colour is pale sulphur yellow, the form of flower perfect. Killarney, flesh shaded white, delicately tinted pale pink, is a Rose already popular. The buds are long and pointed, in this stage of its growth being exceedingly lovely. To complete the dozen I will conclude with Lady Mary Beauclerc, a rich madder Rose in colour, with silvery reflexes. It is a massive Rose of striking appearance, ideal in form, and sturdy in habit. —OSWALDSTREE.

A PIT-MASON DUCHESS.—A correspondent who noticed our excerpt from a provincial paper (page 522) bewails our want of knowledge. "Of course the well-known Pitmaston Duchess is meant," he says, "and not Pit-Mason, a lapse that should not occur in your columns." We think our correspondent has yet to undergo the surgical operation suggested by Sidney Smith for Seotsmen, in order that they might see jokes. (Our correspondent is English!) We thought the "Pit-Mason Duchess" quite funny enough to smile at; and may gardeners not smile?



Profitable Varieties of Bush Apples.

(Continued from page 517.)

A comparatively new Apple, though still outside the thirty year limit previously mentioned, is Lord Burghley, which was raised in the gardens of the Marquis of Exeter at Burghley, near Stamford, and first fruited in 1865. The fruit is of medium size, golden yellow with red on one side, and is slightly angular. It is very tender and juicy, with somewhat of a Pine flavour. It is a sturdy upright grower, though it does not make a very large tree; in fact, is said to be unsuitable for standards. It has received a First-class Certificate from the Royal Horticultural Society, but is not very widely grown yet, not having been boomed like some, and is not so frequently seen on the exhibition table as one would expect, considering that it is both handsome, good, and prolific. It is in season from January to May, and should be allowed to hang late like Sturmer Pippin. The later it hangs the firmer in texture, and consequently juicier, it will be in the spring, when it is much appreciated. I may seem to be departing from the opinions expressed above in advocating a comparatively new Apple; but this is one I am growing myself, and I am very pleased with it. A writer in one of the gardening papers lately asked why people grew the small Old Nonpareil, when there were such Apples as Sturmer Pippin, Lord Burghley, and Duke of Devonshire, all as good in flavour, as firm in texture, and as late or later, with the great advantage of being considerably larger.

ADAMS' PEARMAN.

As a contrast to the recent origin of Lord Burghley may be mentioned Adams' Pearmain. It is of real Pearmain shape, that is, smaller at the top than at the stalk. The term Pearmain, which is applied to so many Apples, is said to be from the Latin words *Pyrus magna* (great Pear), because the shape bears some resemblance to an inverted Pear. It is a handsome scarlet fruit when it gets enough sun. Of fine flavour, and a good addition to the Christmas dessert, lasting well into the spring. At Covent Garden I have seen it selling at 10s. a bushel in March and April. The growth is slender and upright, and forms a most prolific bush, bearing fruit at two or three years old. It has peculiar spoon-shaped leaves, which make it easily recognisable even without fruit upon it. It should be only lightly pruned.

FEARN'S PIPPIN.

I will now mention two Apples that are equally good for dessert or culinary purposes. One is Fearn's Pippin, a bright red Apple of medium size, a compact upright grower, and abundant bearer. Its beautiful colour and medium size proclaim it essentially a dessert Apple. Its good looks cause it to be one of the most popular Apples in the streets of London, where it is, however, of nothing like the flavour it is when allowed to mature on the tree and then properly stored. It is at its best in January or February, when it is brisk and refreshing, getting sweeter later. It may be given a couple of feet less space than the other double purpose Apple, namely, Dutch Mignonne.

DUTCH MIGNONNE.

This, though compact, is much branched and spreading in its growth, instead of upright like the preceding. The tree is quite remarkable for the thickness with which the shoots are set with fruit-buds, and I have seen trees literally so clothed with fruit that scarcely any wood could be seen, except the stem. The fruit is rather large if not too thick, handsome, very hard, and good for dessert in some seasons until May. Dr. Hogg says: "It is a very valuable and delicious dessert Apple, well adapted for dwarf or espalier training."

STIRLING CASTLE.

In addition to these two double-purpose Apples, three purely cooking Apples must be given. The first is Stirling Castle, so called because it was raised at Stirling about 1830. It is a fairly large Apple, at its best in October or early November, and is an enormous bearer—so much so, in fact, that on the Paradise it does not make sufficient growth, and should in consequence be grown on the Crab stock. Even then it needs liberal treatment to perfect its heavy crop, as there is no fear of its ever growing too strong. Early in the season it is beautifully crisp and acid, and if an Apple is wanted in September to mix with Blackberries or Plums for preserving, none more suitable could be selected.

LANE'S PRINCE ALBERT

is another, it may almost be said, immoderate bearer, and for that reason should be on the Crab stock. It is a large Apple, perfectly round, and is good till April, in which month it is very fair for

dessert if well matured in the autumn. Dr. Hogg describes it as "A marvellous bearer." It is a curious instance of an Apple being neglected for many years and then discovered, as this Apple was raised by Messrs. Lane and Son, of Berkhamstead, and first exhibited in 1857. This and the preceding variety will, if liberally treated, give the largest quantity of Apples off a given space of ground. Both often need thinning to get large fruit, both have a rather pendulous habit of growth, and this is intensified by the great weight of fruit the branches bear. On this account what little pruning either of these two varieties need should be to a bud pointing upwards, so as to counteract in some small measure the drooping tendency. These two varieties alone are sufficient to supply the kitchen for the autumn, winter, and early spring, Stirling Castle being ready for use the beginning of September, or earlier, and Prince Albert lasting almost to May.—A. PETTS.

Cordon Gooseberries and Currants.

Red Currants and Gooseberries are such prolific and regular cropping fruits that no private garden should be without them, and, indeed, there are but few in which they are not grown. The bush form of growing both is the one usually adopted, and excellent results are undoubtedly obtained from that form of tree, but under some circumstances cordon trees have so many advantages that I wish to draw particular attention to their merits, without in any way deprecating the value of bushes.

In some gardens very little room can be spared for Gooseberries and Currants, and in such cases I unhesitatingly say that cordons are a real boon, because by their use a number of varieties can be grown in a limited space; and it is an open question whether or not a greater amount of fruit can be obtained from a given area by employing cordons than by planting any other form of tree. Fences formed of Gooseberries and Currants also make admirable screens, and considering how frequently it is necessary, even in a moderate-sized garden, to break up the space into numerous divisions, there are certainly hosts of opportunities of turning cordons to good account. Where north or west walls can be spared for the purpose, splendid crops of fruit can be grown upon them, which, if netted, may be kept very late, and at all times fruit grown on cordons can be more easily protected from birds than when grown on bushes.

To my mind one of the greatest blemishes to be seen in connection with allotments is the irregularity in which bush fruits are dotted about with a total disregard for order, and in such cases a few lines of cordon trees would certainly look much better, and also be capable of producing a greater weight of fruit without impeding the performance of work connected with vegetable growing.

Fences five feet in height answer admirably, and it is not a very expensive business to erect these with iron uprights and galvanised wires, although a cheaper fence can be formed by using wood and wire. In all instances one foot apart answers for the wires.

Before planting, the soil should, of course, be trenched; and if it is deep and rich, no dung should be given, as it will only tend to make trees grow very strongly. Basic slag or superphosphate may, however, with advantage be mixed with the upper spit at the rate of 6ozs per yard. On poor soils I certainly recommend that some well-decayed manure be incorporated with the lower strata, and the surface be mulched after planting.

For Gooseberries, I prefer single to double cordons. Two year old trees answer well, and these should be planted one foot asunder. Avoid planting when the soil is wet, and tread it firmly. Early in spring, cut the side shoots to within one bud of their base, and shorten the central one by a half or one-third its length, according to the strength of each. The subsequent management is quite simple, and consists of pinching the side shoots at the fourth or fifth leaf in summer, and cutting back to two eyes at the spring pruning. The central leader needs only an inch or two removed at the point each year, unless it is weak and thin, then harder pruning must be practised until vigour is secured. When the upper wire is reached treat the leader exactly the same as the side shoots.

Double cordons answer better than single ones for Currants, for when they are grown in the latter form, on deep, rich soils, they often grow too strongly to be fruitful. What the Red Currant delights in is a soil freely intermixed with stones. Its roots are then very fibrous, the growth made is sturdy and fruitful, and when heavy crops are grown, plenty of feeding may be given without fear of strong, unfruitful wood as a result. Those who have deep soils, and find their Red Currants inclined to grow too strongly, should try the effect of a heavy dressing of basic slag.

With regard to pruning, the cordon Currant should be treated in a similar way to that described above for Gooseberries, with this exception—the leaders usually require a little more shortening to induce them to send out plenty of side shoots to form spurs. The double cordons should, of course, be planted 2ft apart, and the following are excellent varieties to plant:—

GOOSEBERRIES.—Red: Crown Bob, Keen's Seedling, Lancashire

Lad, Warrington, Whinham's Industry, Dan's Mistake, Plough-boy. *Yellow*: Early Sulphur, Golden Drop, Yellow Amber, Leveller, Ringer, Green and White, Whitesmith, Langley Beauty, Antagonist, Plunder, Thunder.

CURRANTS.—Comet (new), La Fertile, Raby Castle, Fay's Prolific, White Leviathan, White Versailles.—H. D.

Apple, Yorkshire Greening.

It would be interesting to know why so many fruit-growers omit the name of this variety from their catalogues, for though the tree is a rambling grower, yet the fruits are good for culinary purposes, and in use from October to January. It is best as a bush for small gardens, and is favoured in certain districts, but of course, Ribston Pippin, or Newton Wonder, are much more generally utilised. Yorkshire Greening is a large Apple, rather flat and slightly angular, dark green in colour, and flushed and striped with red on the sunny side, and heavily speckled all over with grey russet.

Societies.

Essay on the Grape-Vine at Hull.

The Hull and District Horticultural Association held its third meeting of the winter session at the Imperial Hotel, Paragon Street, on December 1st, Mr. J. P. Leadbetter, of Tranby Croft, in the chair, when Mr. Allsop, of Dalton Holme, read his paper on the Cultivation of the Grape Vine. Dealing with the matter in point of chronological order, he first spoke of the great antiquity of the Vine, and alluded to several verses of the Bible in which it was spoken of. Coming nearer home, its history in Britain was lightly traced and brought up to our own times. Mr. Allsop then struck what might be considered the keynote of his essay: for he rightly attaches paramount importance to the atmosphere of a vinery. It was pointed out that in keeping the atmosphere in a correct state as regards moisture, freshness, and buoyancy from the time the Vines were started until the bunches were cut, and even until they were started again, was the most important item in successful cultivation. The essayist then proceeded to detail his method of forcing, and attached great importance to the syringing. He gave it likewise as his opinion that shanking was more often due to dryness of the border than attributable to the roots breaking into a bad subsoil. The border should always be kept moist, and some food given to it at every other watering. Mr. Allsop favoured the lean-to form of structure, but spoke of the span-roof as being admirable for late Vines. The border he advised to be made of two-thirds loam, freshly cut, the remaining one-third to be composed of lime rubble, charcoal, bones, wood ashes and soot. A detail which cannot be too strongly emphasised is that the wires on which the rods are trained be from 20 to 24 inches from the glass, thus allowing plenty of room for the development of healthy foliage, and also to minimise the danger of scalding. The varieties said to be the best for keeping were Lady Downe's Seedling, Gros Colman, Black Alicante, Muscat of Alexandria, and Mrs. Pearson. The essayist then gave an account of the three most troublesome insects, red spider, mealy-bug, and thrips, and described remedies. The asking of questions appeared to be greatly enjoyed by Mr. Allsop, as well as by the members. Several were put, and evoked answers abounding in wisdom, and clearly based on good practical experience. A hearty vote of thanks was accorded.—W. R.

National Chrysanthemum, Crystal Palace,

DECEMBER 8TH AND 9TH.

The last show of the National Chrysanthemum Society for the year was held on Tuesday last, and, if due consideration be taken of the weather, the show might be classed as up to the average, though greater competition was required in most classes. The trade exhibits were numerous, and made an excellent display. The premier class was that for twenty-four Japs (eighteen varieties), but there were only two competitors. Mr. J. Simon, gardener to W. W. Mann, Esq., Ravenswood, Bexley, led. The varieties employed were Mrs. E. Thirkell, Dorothy Pywell, Marquise V. Venosta, Madame R. Cadbury, G. J. Warren, Madame Carnot, Acme, Mrs. F. Grimwade, Duchess of Sutherland, Mrs. J. Bryant, Henry Barnes, Queen Alexandra, Mrs. J. C. Neville, Henry Stowe, Florence Molynceux, Nellie Bean, Mons. Chenon de Léché, and C. J. Mee. Mr. G. Hunt, gardener to P. Ralli, Esq., Ashted Park, Epsom, was second, with good blooms of F. W. Vallis, Dorothy Pywell, Countess of Harrowby, Bessie Godfrey, and C. J. Mee. In the class for twelve Japs three contested, all of fair quality. Mr. W. Jinks, gardener to L. J. Drew,

Esq., Knowle Green House, Staines, was first, who staged W. H. Whitehouse, Guy Hamilton, Madame P. Radaelli, May Inglis, Mrs. E. Thirkell, a seedling, Loveliness, Mrs. F. Grimwade, Mrs. Barkley, M. L. Remy, Chas. Penford, and Mrs. Weeks. Mr. G. Hunt followed with good blooms, while Mr. J. Simon made a very good 3rd. There were again three entries in the class for 6 distinct Japs, Mr. W. Jinks proving an easy victor. The 2nd prize was won by Mr. W. G. Prudden-Clark, York Road, Hitchin, while Mr. Shipway, The Grange, Sutton, was 3rd.

The class for 12 incurveds (6 varieties) was represented by two exhibitors. Mr. J. Simon was deservedly awarded 1st with Frank Hammond, Duchess of Fife, Ialine, Ralph Hatton, Bonnie Dundee, Snowdrift, and Mrs. F. Judson. Mr. G. Hunt was a close 2nd, his best blooms being Mdle. L. Faure, Mrs. E. Seward, Frank Hammond, and May Bell. The class for 24 bunches of Chrysanthemums in vases only brought out one competitor, Mr. G. Hunt, who made a good display. Mr. G. Hunt was the only exhibitor in the class for 12 vases of Japs. Mr. W. C. Pagram was the only representative for 6 bunches of large flowering single varieties. The varieties were Mrs. Roberts, Duchess Elizabeth, Framfield Beauty, Golden Star, Edith Pagram, and Sylvia. The small flowered single varieties only induced one competitor to stage—Mr. W. C. Pagram, with Ox-eye, Scarlet Gem, Mrs. Langtry, Madge, Cannell's Gem, and Terra-cotta.

There were but two groups of Chrysanthemums and miscellaneous plants. First, Mr. W. Howe, Streatham Common. Chrysanthemums, however, played quite a minor part, the chief features being Poinsettias, Begonias, Palms, Crotons, and Asparagus Sprengeri, which were well grown and beautifully displayed. Mr. R. Forster, Nunhead Cemetery, was 2nd with a group of Chrysanthemums arranged with Asparagus, Palms and Ferns.

The six flowering Begonias were represented by two entries, the first prize being taken by Mr. H. Perkins, gr. to the Hon. W. F. D. Smith, Greenlands, Henley-on-Thames, who staged grand plants of Gloire de Lorraine. Mr. W. Howe followed, and he was the only exhibitor who staged a table of flowering and berried plants.

For 6 bunches of decorative, spidery, or thread-petalled Chrysanthemums there were three entries, and the 1st prize was well won by Mr. Charles Brown,



Apple, Yorkshire Greening.

gr. to R. Henty, Esq., Langley House, Abbots Langley; the varieties were Mrs. Filkins, Cannell's Favourite, Sam Caswell, and Arab. Mr. W. C. Pagram made a capital 2nd; while Mr. A. Taylor, East Finchley, brought up the rear. For 6 bunches, any varieties, there were but two entries, Mr. W. G. P. Clark coming out 1st with Lady Roberts, Madame Herrewége, Mrs. Barkley, Edith Pilkington and Godfrey's Pride. The exhibit was praiseworthy for the time of the year. Mr. E. E. Horsey, Goffs Oak, Cheshunt, was a poor 2nd.

Floral Committee.

There was a good attendance of members present, and the same feeling pervaded their awards on this occasion as has been so clearly manifested this season. Several novelties were placed before them, but only two awards were made. *Souvenir de William Clibran* (Clibrans), a good white, incurved variety of fine form and petal: already in commerce.—(F.C.C.). *Allman's Yellow* (T. Allman), a fine December decorative variety, rich golden yellow, of the Tuxedo type; will make a fine market variety.—(F.C.C.)

MISCELLANEOUS EXHIBITS.—The finest display of the whole show was the exhibit from Mr. H. J. Jones, Ryecroft Nursery, Lewisham. The varieties were arranged separately in huge vases with appropriate foliage. The best were Dorothy Pywell, Snow-drift, Viscountess Cranbourne, Madame P. Radaelli, A. J. Foster and General Hutton. The late flowering thread-petalled varieties were much in evidence, while the display, taken as a whole, was perhaps Mr. Jones' best effort in December.

Mr. Norman Davis, Framfield, Sussex, contributed a nice group arranged on the ground floor, the best varieties being Madame Paolo Radaelli in grand form, General Hutton, J. R. Upton, Western King, G. J. Warren, and Lady Violet Beaumont.

Mr. H. Perkins arranged a large table of Begonias.

Messrs. Clibran and Son, Altrincham, made a bold display of single Chrysanthemums, and they had a few good decorative varieties. A few of the best were Mrs. E. Roberts, Mrs. F. K. Charlton, Blowden Jones, and Miss Beattie Rowden. Mr. R. Forster, Nunhead Cemetery, had a fine semi-circular group of Chrysanthemums.

Apples were represented by Messrs. J. Cheal and Sons, Crawley, who had a goodly display of dishes. The best were Allington Pippin, Emperor Alexander, Newton Wonder, Jubilee, Bismarck, and Cox's Pomona.

Messrs. W. Cutbush and Sons, Highgate, made an interesting exhibit of Carnations in vases, the chief being Mrs. S. J. Brooks (undoubtedly the best white), Mrs. T. W. Lawson, and W. H. Cutbush.

The firm of Messrs. H. Cannell and Sons, Swanley, made a bold display of large plants of Begonia Gloire de Lorraine, also an unique exhibit of Zonal Pelargoniums, in which were noted Fred Bean, Duke of Norfolk, The Mikado, Duke of Bedford, Lord Roberts, Lady E. Malet, and Winston Churchill. Chrysanthemums were represented by a good collection of the late decorative varieties, also a good display of exhibition blooms.

Messrs. J. Peed and Son, West Norwood, made a fine display of Chrysanthemums arranged with Palms, Dracenas, Crotons, and Asparagus Sprengeri. The chief Chrysanthemum flowers were Madame R. Cadbury, Etoile de Lyon, Miss Jessie Cottey, Mrs. Filkins, and Mrs. Barkley.

National Sweet Pea—Annual General Meeting.

SUMMARY.—Mr. Henry Eckford to be president; Mr. Whittaine Nutting, chairman of committee; keen discussion on the question of judges, the Trade to be represented in that capacity. In the staging of flowers, part of the vine or haulm of the Pea to be allowed. Provincial shows proposed. London show at Earl's Court. The Society has a balance of £30 8s.

The annual general meeting was held at the Hotel Windsor, London, on Tuesday last, about a score being present. The meeting lasted 1½ hours. The following report and balance sheet for 1903, as follows, were adopted unanimously:

"In presenting to the members of the Society the third annual report, the committee is gratified that it should be so satisfactory. The past season has been the most important in the Society's brief history. The controversy, which arose out of your committee's action in regard to the judges for the last exhibition, was fortunately only momentarily, and the arrangements for 1904 will be submitted to the committee. The past summer was wet and cool, with the result that Sweet Peas flourished grandly, though the coldness of the spring put a severe handicap upon the plants in their early stages. In many places the plants attained to the exceptional height of ten feet, and produced flowers which were remarkable alike for colour, size and substance. The exhibition held in Prince's Hall, Earl's Court, was a magnificent success, and your committee's only regret is that the exhibition authorities failed to adequately advertise the gathering. Apart from this, the authorities were most courteous, and did all they could to make the exhibition a success. The thanks of the Society are specially due in this

matter to Henry Hartly, Esq., the managing director, and to Mr. Bond, the clerk of the works. The exhibition was so extensive that it was found imperative to remove the barrier at the one end of the large hall with a view to securing an extra 360 square feet of space, and even then the tables were in some places a trifle crowded. The general effect of the show was excellent, though a little flatness was apparent in the centre tables. This your committee will endeavour to overcome at future exhibitions, as it is very desirable that every advantage should be taken of the excellence of Sweet Peas for decorative effects.

"In 1902, the Society conducted a classification of Sweet Peas, and it was thought that this might be annually revised. At a meeting of your committee held on June 9, it was, however, considered that an audit of the varieties shown would be valuable, as indicating the best sorts to grow, and the honorary secretary was instructed to arrange for this. Mr. Charles H. Curtis was eventually requested to undertake this decidedly onerous task, and the results of his labours are set forth in the schedule. The tabulations show to what a remarkable degree the classification of the previous year was correct, as the present audit substantiates it in all salient points. Your committee would especially commend this audit to the Trade, to whom it is bound to prove of immense assistance in determining the varieties most worthy of retention in catalogues; and it would also draw the attention of cultivators to the 'colour list' in the audit, as this is certainly a list of the very best varieties. Your committee would again draw the attention of members to the properties of the Sweet Pea. [These have been printed frequently in the *Journal*, and are therefore omitted now.—ED.] Upon the completion of the judging on the first day of the exhibition, the committee met to consider the merits of the new varieties, of which some two or three dozen were shown. First-class certificates were awarded to Florence Molyneux (Dobbie and Co. and E. Molyneux), Cupid Her Majesty, and Cupid Lottie Eckford (H. Cannell and Sons), Scarlet Gem and King Edward VII. (Henry Eckford). The following varieties were highly commended:—Cupid Mrs. J. Chamberlain, Cupid Royalty, and Cupid Captain of the Blues (H. Cannell and Sons), Bolton's Pink (R. Bolton). Mr. John Ingman, from Mr. Silas Cole, the committee desired to see again. The silver medal of the Society for the finest novelty of the year was unanimously awarded to Scarlet Gem, which, although in some cases having only two blossoms on a stem, was so remarkable in colour as to bring it well within the scope of the last clause in the 'Properties of the Sweet Pea.' The financial position of the Society is satisfactory, for, notwithstanding the fact that the expenses at the show were slightly greater, the balance at the bank is rather higher than last year. The support given by the Trade was most excellent, and your thanks are due to those who gave special prizes, as well as to the many friends who helped with annual subscriptions. The number of members again shows a substantial increase. The thanks of the Society are especially due to Mr. Charles E. Shea and Mr. George Gordon, V.M.H., President, for the assistance they rendered in adjudicating upon the several splendid exhibits contributed by the Trade. Their awards were: A large Gold Medal to Messrs. Hobbies, Ltd., Dereham; Gold Medals to Messrs. C. W. Breadmore, Winchester, and H. Cannell and Sons, Swanley; Silver-gilt Medals to Messrs. Dobbie and Co., Rothesay, and Henry Eckford, Wem; large Silver Medal to Messrs. Jones and Son, Shrewsbury; Silver Medal to Messrs. E. W. King and Co., Coggeshall; and a small Silver Medal to Mr. J. Williams, Ealing. Your thanks are also due to Mr. Cecil W. Greenwood for invaluable assistance rendered to the honorary secretary in the management of the show, and also to the several members of the committee who acted as stewards."

BALANCE SHEET, 1903.

	£	s.	d.
Balance in hand	29	19	2
Subscriptions	75	3	6
Donations	46	16	0
Advertisements in schedule	1	5	0
Hire of space	9	3	9
„ „ bottles	4	1	8
	166	9	1
Honorarium to R. Dean	5	5	0
„ „ H. J. Wright	5	5	0
Prizes awarded	68	18	0
Preparation of audit	3	3	0
Assistance at show	1	8	3
Hire of vases	1	14	9
Printing, cards, certificates, circulars, &c.	17	0	1
Hire of rooms	2	0	6
Judges' fees	8	8	0
Luncheon to committee and judges	8	18	3
Silver medal	0	14	6
Advertising	3	10	0
Sec.'s expenses, postage, wires, petty cash, &c.	0	6	0
Bank charges	0	4	9
Balance at bank	30	8	0
	166	9	1

Examined as per vouchers, &c., and found correct.—C. W. GREENWOOD.

Following the adoption of the foregoing report, the retiring president proposed Mr. Henry Eckford, of Wem, for that office. Mr. Robert Sydenham (Birmingham) seconded. Mr. Gordon has been president ever since the society's foundation, and greatly to his devotion is its success due. He stated, by way of explaining his discontinuance in the office, that he thought it was good for no society that the president should consider his office a "freehold." Mr. S. B. Dicks (of Cooper, Taber and Co.), on retiring from the chairmanship of committee, proposed Mr. Whitpaine Nutting for the post, and Mr. C. E. Greenwood seconded. The propositions were unanimously agreed to, and the retiring officers were heartily thanked. The hon. treasurer (Mr. N. N. Sherwood), and the hon. secretary were each re-elected, the latter (Mr. Horace J. Wright) receiving an honorarium of ten guineas. It was also agreed to award two guineas to Mr. C. E. Greenwood, for his invaluable assistance at the show and at other times. The committee was re-elected, and Messrs. Geo. Gordon, C. W. Breadmore (Winchester), G. Crabbe (Addlestone), and John Green (Dereham) were added. Messrs. W. P. Wright, J. F. McLeod, and Richard Dean retire.

Mr. S. B. Dicks proposed and Mr. C. H. Curtis seconded, that the desirability of holding provincial shows be brought before the committee, and that this body be instructed to try and make arrangements with provincial societies at whose shows the National Sweet Pea Society, would offer prizes, and would have the control of the section devoted to Sweet Peas. Places mentioned were Wolverhampton and Shrewsbury. The meeting unanimously agreed. Regarding the dates of the London Show, after some discussion it was agreed to leave the matter with the committee, who were instructed to fix dates as near to those of the past show as possible (June 15 and 16). The difficulty was that Holland House Show and the Temple Rose Show happen about the same time.

Mr. W. Cuthbertson (Dobbie and Co.), of Rothesay, N.B., now brought forward the question of the exclusion of Trade growers from acting as judges. He wished the matter to be discussed in a purely friendly spirit, and thought that there was no reason why they should be debarred. He suggested that experts in the Trade be appointed as judges, along with amateur and professional gardeners. Mr. James C. House, of Westbury-on-Trym, near Bristol, supported Mr. Cuthbertson. He thought the executive committee had not met the wishes of the society's best supporters. He assured those present that there was a strong feeling in the Trade on this point, and it extended all over the country. He knew the arguments of the committee. They were: That by inviting amateurs to judge, they became more and more enthusiastic growers of the Sweet Pea. Mr. House thought, however, that the best way to popularise the Sweet Pea was to first make the seedsmen take a real interest in the flower, and their customers will do so too. Since he himself, in his own business, took to cultivating Sedums and some other humble plants, the amateurs around him had likewise grown interested in these plants. He would second any proposal that representatives of the Trade be included in the judges' roll and be allowed to adjudicate novelties. Mr. John Green (Dereham) suggested that one-third of the judges be amateurs, one-third professionals, and one-third trade growers.

Mr. Geo. Gordon, chairman, intervened, saying that the letters to the papers had been utterly unjustified. The committee had not had the merest intention of slighting the Trade, but they had deemed it advisable not to appoint representatives therefrom, so as to avoid any suspicion of favouritism on the part of the committee. He pointed out that the Trade were actually in the majority on the committee, and that being so, it should be impossible, he thought, to do anything against the interests of seedsmen.

Mr. Robert Sydenham did not doubt that the committee wished to meet the wishes of its supporters, but there should be no loop-hole of uncertainty, and by accepting the proposal before them they would get over any chance of serious friction. He supported Mr. Cuthbertson, as did Mr. Dicks.

Mr. C. H. Curtis, "as the originator of the whole trouble," explained in objecting to Trade judges, he had simply suggested that precedent be followed. Mr. Gordon said that in view of what had taken place, he hoped the committee would appoint Trade judges. The proposition, as follows, was carried without a dissentient: "That the general committee be instructed to select the judges in equal numbers from Trade, professional, and amateur gardeners."

Mr. House raised the question as to how Sweet Peas should be shown, for though their own foliage is allowed in bouquets, yet there had been disqualifications in the provinces, of exhibitors who had staged trusses of flowers attached to the haulm (or vine). He suggested that part of the vine be allowed, but, of course, only one flower truss. The matter was referred to the committee.

Erica propendens.

This beautiful, bright mauve-pink flowered *Erica* received a first-class certificate some years ago when shown at a R.H.S. meeting by J. Veitch and Sons, Ltd. It is a charming spring and summer-flowering subject for the greenhouse.

County Council Instruction: Horticulture.

(Concluded from page 516.)

This concluding instalment records what the County Councils of Scotland, Wales, and Ireland are doing, or have done. It is somewhat remarkable that Scotland should have so few instructors. In order to make the English list complete we may add, what all "Journal" readers know, however, that Middlesex has an experimental garden at Pymmes Park, Edmonton, under the care of Mr. J. Weathers; the Isle of Wight has a garden at Newport, superintended by Mr. Charles Martin; and Oxfordshire has practice plots, under the direction of Mr. S. Heaton.

SCOTLAND.

EDINBURGH AND EAST OF SCOTLAND COLLEGE OF AGRICULTURE.—We do not have a permanent Horticultural Lecturer on our staff, but employ, for short courses, Dr. J. H. Wilson, St. Andrew's University



Erica propendens. (Nat. size.)

and the Rev. G. D. Hutton, M.A., B.Sc., The Manse, Bothkennar-by-Carron. They are both capable lecturers, as well as thoroughly practical men. The other lecturer we had, Mr. Wm. Williamson, gardener, Warriston, Edinburgh, was formerly gardener at Turrit House.—WM. SCOTT STEVENSON.

WEST OF SCOTLAND AGRICULTURAL COLLEGE.—Professor N. A. McAlpine, B.Sc., is our College Lecturer on the Principles of Horticulture. Mr. J. Muir, F.R.H.S., is an occasional member of the staff, and is engaged as occasion requires for work in the counties.—JOHN CUTHBERTSON, Blythwood Square, Glasgow.

WALES.

BRECKNOCKSHIRE has not appointed an instructor.

CARDIGANSHIRE.—The County Council have not a regular Instructor in Horticulture in their employ. They make use of the Instructor

in the service of the University College of Wales, Aberystwyth, Mr. John L. Pickard, who gives courses of instruction and demonstrations at centres in the County, fixed each year, extending over from ten to fourteen days. He also holds summer classes at the College open to schoolmasters and mistresses, to whom the Council makes grants towards their expenses. We find this a more satisfactory course than appointing an instructor of our own.—H. C. FRYER, Clerk of the Council, Aberystwyth.

CARMARTHEN.—Our Instructor is Mr. Pickard, University College of Wales, Aberystwyth. We have no experimental garden.—J. W. NICHOLAS, County Education Offices, Shire Hall, Carmarthen.

DENBIGHSHIRE County Council has no Instructor in Horticulture and no experimental gardens.—W. R. EVANS, Clerk of the County Council, County Offices, 5, Castle Street, Ruthin.

FLINTSHIRE.—I beg to say that we have no teachers of horticulture appointed directly by the County Council. A grant of £250 a year is made to the University College, Bangor, for the teaching of several branches of agriculture, to which, I believe, horticulture has been added recently. I would advise you to write for further information to Professor Thos. Winter, of the Agricultural Department, North Wales University College, Bangor.—P. MOSTYN WILLIAMS, Rhyl.

GLAMORGANSHIRE.—No Horticultural Instructor has been appointed in this county.

MONTGOMERY.—The Montgomeryshire County Council have not appointed any Instructor in Horticulture.—GEO. D. HARRISON, Welshpool.

PEMBROKESHIRE.—The Technical Instruction Committee have twice engaged the services of Mr. Pickard, of the University College, Aberystwyth, to give lectures and demonstrations in horticulture, but no permanent instructor has been appointed.—WM. DAVIES GEORGE, Haverfordwest.

RADNORSHIRE.—No Instructor in Horticulture is appointed by the Radnor County Council, nor is there any experimental garden.—J. W. VAUGHAN.

IRELAND.

We furnish only the names of those counties where an instructor is appointed. All the others have as yet no horticultural teachers.

CARLOW.—Our Committee have not as yet appointed an Instructor in Horticulture, but the department have decided on sending down Mr. Orr, their own inspector, to deliver a course of lectures in this county. As yet no proper garden has been laid out.—P. J. GRIFFIN.

CAVAN.—Just at present my Committee are without such an instructor, the department having refused to sanction the appointment of our last; but we hope to make a fresh appointment in November, when I may forward name to you.—JOSEPH P. GANNON, Erskine House, Cavan.

CORK.—Replying to yours of 25th October, we have appointed during the past two years Mr. James Blemens, Blackrock, Cork, Instructor in Horticulture and Bee-keeping.—J. T. CARROLL, Sec., Court House, Cork.

GALWAY.—Instructor in Horticulture and Bee-keeping, Mr. John Meade, Committee of Agriculture, County Court House, Galway.

WEXFORD.—The Horticultural Instructor (itinerant) is Mr. Thos. Scott, Court House, Wexford.

WICKLOW.—Our Instructor in Horticulture is Mr. P. J. Kane. His letters should be sent c/o the Secretary, Court House, Wicklow.—P. T. HEALY, Sec.

MONAGHAN.—Mr. John Toner is the Horticultural Instructor for this county. His address is Court House, Monaghan. There is not an experimental garden.—P. MAQUIRE, Sec.

TYRONE.—No Horticultural Instructor will be appointed for this county until the New Year.—PERCY G. DALLINGER, Court House, Omagh.

WATERFORD.—The Instructor in Horticulture is Mr. Denis Joyce, County Offices, Dungarvon, Co. Waterford. It is expected that experimental gardens will be provided this year.—JOHN BOYLE, Sec., County Offices, Dungarvon.

Trade Note.

A Ladderman's Belt.

When working upon ladders, all men incur the risk of falling, from one cause or another; and now that employer's liability is such a troublesome quantity, it is well to avoid danger as much as possible. Mr. Heathman, of Parsons Green, London, has produced a waist-belt with adjustable snaphook which grips any ladder rung, and in such a manner as to leave the worker free liberty of movement in his labour, even to the extent that he may turn right round and back the ladder. It is also found that a workman can rely upon the belt, and use both hands at work with far greater power than without it. For the use of gardeners in pruning and tree-logging, where over-reaching is such a great danger, this belt should prove invaluable. The cost is only 12s. 6d., and this outlay is soon repaid by saving of workmen's time, as well as "ease of mind," afforded them.

THE BEE-KEEPER.

Queries for "E. E."

As a constant reader of the Journal, I am very grateful to your correspondent "E. E., Sandbach," for his excellent papers concerning bees, and which have been very useful to me. For some time back I have always been looking forward to an article by your worthy contributor with reference to the management of the bee under the hexagonal Stewarton box principle, especially as to prevention of swarming. I should, indeed, be very pleased to have "E. E.'s" views in your forthcoming issues regarding these old-fashioned (and profitable, I am told) Stewarton boxes.—HEXAGONAL.

Wintering.

During the next month or so the apiary should be in a state of rest, requiring little attention beyond an occasional observation at the entrance in order to prevent the same being choked with dead bees or snow, and keeping the insects dry and well protected from the weather. In this country bees require some attention even during the winter; not, however, in an interfering or disturbing way, but in order to prevent the many evils consequent upon the activity unusually mild weather often causes. Sudden changes of temperature may prove as injurious to them as extreme cold; and although this is seldom heeded, it often proves disastrous, and the cause remains obscure.

In cases of snow storms it is not necessary to close the entrance of a hive, but they should be shaded to prevent the sunlight lighting up the interior of the hive and thus inducing the bees to come out for a flight, when they suddenly become chilled and fall into the snow to perish. Hives should be examined periodically, the entrance being gently raked with a hooked wire to bring forth any dead bees which may be on the floor-board. During fine, sunny days the roofs may be removed quietly and the quilts examined, and if any are found to be wet they must be removed and dry ones substituted. Take care to perform these operations without disturbance, as it will cause excitement and heat, and increased consumption of food, after which there is an equal necessity for a cleansing flight. It is, therefore, unsafe to irritate them during a long, cold spell.

Entrances should be regulated according to the number of bees inside. Warmth is absolutely necessary for their existence, as well as comfort, and if it passes away too rapidly, as in over-ventilated hives, the bees become too cold, and their vapours condense on the sides of the hive and combs, rendering the cold still more intense. The bees are consequently compelled to consume larger quantities of food, and there is an unnatural activity during the heat production. The temperature of the cluster is preserved by an increased activity of the respiratory organs of the bee, therefore anything which tends to reduce the warmth of the interior of the hive, or anything which causes them to raise it unduly, such as disturbances, is injurious. About six inches is the requisite distance for ventilation at the entrance. When spring opens they may, of course, be contracted again, and all made tight and compact to retain the heat to assist brood-rearing.—E. EATON, Sandbach.

Young Gardeners' Domain.

Principles of Propriety.

I have hitherto never contributed anything to your excellent paper, but I have been prompted to do so by reading in your issue of November 26 an article under the heading of "Principles of Propriety," and signed by "Scot." Now, I think in my own humble opinion, "Scot" is greatly overstepping the mark by saying that nine-tenths of the young men in England spend too much time in public-houses and pleasure seeking. Certainly this is a very grave offence for us young Englishmen to be charged with, and why should we be blamed any more than the young men in Scotland? Personally speaking, I have been engaged in the pursuits of gardening for about twelve years, and my own experience has taught me quite the reverse to that of "Scot." The largest bothy I ever lived in was one with five in it, and in that place I spent three years; and, further, I may say three happy years; and up to now I have never lived with a young man who has been too fond of spending his spare time in public-houses. I quite agree with what "Scot" says about bad language, and to my mind it is just as detestable outside a gentleman's establishment as in it.

Then he mentions smoking. Well, I think there are not many places where smoking is allowed during working hours, but he says "If one must needs smoke let him get out of sight in the shrubs for a few minutes, and have his fifteen draws." That principle I don't hold with. Does "Scot" take his snap of bread and cheese, and have it in the shrubs, or does he have it in the bothy?

If the latter place, why cannot a man go in there and have his fifteen draws, instead of having them among the shrubs during all kinds of weather? I fail to see why the one occupies more time than the other. With regard to punctuality and study, I quite agree with all that "Scot" says; but the object in penning these few lines is to try to show him that the young men in England are not quite so bad as what he makes them out to be; if so, I am pleased to say it has never fallen to my lot to live amongst them. In conclusion, I should like to ask "Scot" to give us the character of his own countrymen, as I am of opinion that if it is better than ours, it might be the means of us trying to mend our supposed evil ways. Trusting you will find space in your valuable Journal for these few modest remarks.—I am, sir, AN ENGLISH FOREMAN.

Erowallia speciosa major.

This plant forms a great addition to the flowering subjects for the warm greenhouse or intermediate house during the winter months, its intense blue coloured flowers, combined with its bright green foliage, producing a brilliant effect. The more common method of propagation is by cuttings taken annually about February or March, but much better coloured flowers on plants which bloom later in the year (a consideration) are produced from seedlings.

The seed should be sown in a light soil, in a well-drained pan, about the end of April, and placed in a temperature of about 60deg Fahr. Give a watering through a rosed can, and place a piece of glass over the pan, and keep moist. The seedlings will appear in a week or ten days, and when large enough to handle, prick them out into pans containing a light, loamy soil, and place in a position near the glass in a pit or house of the temperature indicated, and keep shaded and carefully watered until they are again growing well.

In a month or six weeks they should be large enough to transfer to small 60-sized pots, using a compost consisting of two parts loam, one of leaves, and one of sharp road grit. Water carefully for a few days until they root into the fresh soil, and when established, pinch out the tops of each to induce them to break, and throughout the growing season this must be attended to so as to form a nice bushy habit. The plants will require another shift later on, when necessary, a 5in pot being sufficient. Be careful to have good drainage, and use a similar compost to the one employed previously, only coarser, and then return to their former position and treat as before. Keep a sharp look out for red spider and thrips, and if they make their appearance, the former can be checked by the free use of the syringe, and the latter by fumigation on two consecutive nights. Cowdung water, or guano, may be given as a food later in the year, taking care not to use too strong, and always be sure not to overwater.—E. B., South Berks.

Lily of the Valley for Forcing.

Where the expenses of the establishment will not allow of a large enough quantity of the above to be bought for forcing, a plan might be adopted for the maintenance of a supply on the same principles as carried out here. A bed, 100yds by 3yds, under the shade of a north wall, is divided into three equal portions, and at this time of the year the roots contained in one of the divisions are lifted, and sorted, and the strongest crowns, which are capable of throwing a flower spike, are placed in propagating boxes about five inches deep, in old soil saved from the potting bench, as it is not particular what they are in, as they make no fresh roots whatever whilst being forced. The smaller crowns are put aside to be dealt with presently, care being taken not to let them get dry. The boxes containing the crowns for forcing are then put in an exposed position on a bed of ashes, so as to get frozen if possible, and given a thorough soaking of water. The small crowns which were put aside are now re-planted on the same portion of the bed from which they were taken, which in the meantime should have been manured and dug.

As the boxed crowns are required they are taken into a house of a temperature of about 60deg or 65deg Fahr., where they soon throw up their flower spikes and foliage much better than the imported Berlin crowns. (It is a general rule not to force any until they have had a good sharp frost on them, as they do not start into growth so regularly.) Next year the second portion of the bed is treated in exactly the same manner, and the remaining portion the third year. By the fourth year the first portion so treated will have grown sufficiently strong to produce flowering crowns again, and by following this simple routine a supply of home-grown crowns can be procured which will give satisfactory results.—E. B., South Berks.

MORELLO CHERRIES should be grown wholly on the fan system, as they are more prolific in this way. The pruning of these will consist in cutting out the old bearing growths and weakened branches, reserving a fair number of the current season's growths, which lay at full length, not less than 3in apart.



Hardy Fruit Garden.

WINTER PRUNING.—There are many advantages in carrying out now the winter pruning and thus relieving the trees and bushes of superfluous wood. The foliage has all fallen, and the roots are completing their active deposition of material in the wood buds and fruit buds, and a dormant state is at hand. The work may usually be carried out under more favourable conditions than occur later, especially in the case of wall trees, when following pruning there is the training, nailing, or tying of the shoots. On damp ground, however, it will be better for the soil and more comfortable for the workmen, if boards are laid down to stand upon when operating. Slightly frosty weather renders the ground clean to tread upon, and the work can be readily done; but in the event of very hard frost the pruning of choice fruit trees should not then be attempted. From now, onwards through the month as opportunity offers, deal with wall trees and trained specimens in all parts of the garden.

APPLES AND PEARS ON WALLS.—As wall trees fine specimens are usually found trained horizontally, and also as cordons with upright or diagonally trained branches. It is often found that horizontal branches are too thickly placed, with the result that the trees are rendered fruitless, owing to the fact that the spurs, especially when they grow at too great a distance from the wall, shade or injure those below them. The thinning out then of crowded branches is one of the first considerations. All principal branches furnished with spurs must not be closer together than a foot. This is the minimum distance, but 15in will in many cases be much better, some varieties of Apples and Pears growing much more strongly than others, consequently the spur growths are thicker and require more room. Following upon the removal of crowded branches, the next thing should be the thinning and regulating of spurs and spur clusters. It is good policy to keep the spurs as near the wall as possible, but when crowding has been permitted of the branches, spur growths will extend unduly from the wall. Elongated spurs must, therefore, be gradually shortened back. In the case of long-neglected trees this must extend over several years if there are buds at the back which will eventually swell and form fruit buds. In some cases the more desperate remedy of shortening to within a few inches of the main branch must be adopted, relying on dormant buds to push, and eventually by culture, developing the best into fruit spurs. Ordinary pruning with many of the trees will only require the foreright or side shoots cutting back to two buds, and a few extended fruit spurs reduced here and there. Where the leading shoots have not filled up their allotted space, shorten them to the length of 1ft, or 15in if strong.

FAN-TRAINED PLUMS AND CHERRIES.—The advantages of this system of growing the trees are the ease with which branches can be replaced when worn out or weakened. Plums may be grown on the combined system of having branches with spurs originated on them and relays of younger wood, this usually bearing well at two years old. Even the spur-furnished branches can be readily replaced when necessary by younger and better wood. Dessert Cherries may be treated similarly. These and Plums are also amenable to horizontal training of branches on walls, and bear well when a spur system has been well established.

CORDON GOOSEBERRIES AND CURRANTS.—For north and east walls to produce a late crop and for espaliers in the open to produce a general supply, cordon culture of these fruits is well adapted. The chief and most abundant growths are foreright shoots, which ought to be pinched back in summer, and in winter cut to basal buds which are situated in clusters at the base. Although the general pruning of Currants and Gooseberries, especially the latter in the open, is not advisable now in view of birds taking the buds during severe weather; yet the pruning of cordons on walls may be safely done, as they rarely attack these buds. Young cordons which have yet to furnish the space allotted them must have the leading shoots shortened to about 10in so as to induce the side buds to push in spring, the growths being pinched in summer and eventually winter pruned. In the case of old trees which may require renovating, a stout shoot should be allowed to originate as near the base as possible. Train it in the direction desired alongside the old branch. Shorten in the winter to induce side buds to push, and when the lower part becomes clothed with side shoots those on the corresponding part of the old branch may be cut off. Treat another length in the same way until the new branch can take the place of the old one.—EAST KENT.

Fruit Forcing.

CUCUMBERS.—Foggy, wet, dull and cold weather, with windy and bright intervals, tax the plants severely, growth being very unsatisfactory. As every ray of light is valuable, the glass should be kept as clean as possible, both outside and inside. Not to give a check use warm sweet soil and not very wet, for earthing up the roots, covering them lightly as showing at the sides of the ridges or hillocks. A few sweetened horse droppings with an occasional sprinkling of soot spread on the surface will attract the roots and afford nourishment to the plants when watered. This is preferable to liquid manure, unless the plants are growing in very small beds, or confined to boxes or pots; then copious supplies will be necessary. Always apply it weak and tepid, and not too often, suffice that the soil be so moist as to prevent flagging. Sufficient atmospheric moisture will be secured by damping the paths and walls in the morning and afternoon of bright days; but avoid an excess, and avoid an arid condition by damping occasionally as the surfaces become dry. Look over the plants at least once a week for stopping or removing bad leaves, thinning the growths as required, but neither pinching the shoots nor reducing the growths will be much needed, yet these must not be neglected, as crowding is one of the greatest evils in the culture of winter Cucumbers.

MILDEW is sometimes troublesome at this time of the year. It may be combated by dusting the affected parts with flowers of sulphur, and the atmosphere should be kept drier. A light brushing over the hot water pipes with a cream of sulphur and skim milk is useful against mildew, red spider, and white fly. Aphides and thrips are best destroyed by fumigation with tobacco paper or vapourisation with nicotine essence. Tobacco powder dusted on green and black fly or aphides destroys them. and fumigation on two or three consecutive evenings eradicates these pests.

PEACHES AND NECTARINES: EARLIEST FORCED TREES IN POTS.—To have fruit ripe at the earliest possible time, and without overtaxing the trees by very hard forcing, they should be started without loss of time to ripen the fruit at the end of April or beginning of May. Only the very early varieties will do that, such as Alexander, Waterloo, Duchess of Cornwall, Amsden June, and Early Rivers Peaches; Cardinal, Early Rivers, and Lord Napier Nectarines. These embrace a good succession for about a month, and all are of good size, fairly grown, or not overcropped; of good colour and of first-class quality. The trees do admirably in a three-quarter span-roofed house facing south, quarter, half, and full standard trees being grown so as to have the heads near the glass. Tomatoes can be grown against the back wall for an early supply of fruit, and when the Peach and Nectarine trees go outside, the house will be at liberty for plants in pots. The trees require the same treatment as trees in borders.

EARLY FORCED PLANTED-OUT TREES.—Trees started in December, or at an early date in previous years, swell their buds promptly without excitement from artificial heat, but those forced for the first time are slower in starting into flower. To have fruit ripe in May, and the trees being of the second early and midseason varieties and not before early forced, the house must now be started. They must not be hurried, but given time to advance steadily and develop a strong flower, perfect in all its parts. The proper procedure is to admit a little air constantly at the top of the house, and above 50deg it should be advanced correspondingly with the temperature. Do not allow a decline below 50deg in the daytime, sufficient artificial heat being employed for that purpose, and with sun heat an advance may be allowed to 65deg, closing for the day before the heat has receded to below 55deg. A temperature of 40deg to 45deg is ample at night or in mild weather 50deg.

WHEN THE FLOWERS ARE ADVANCED so as to show the anthers cease syringing, but afford a moderate amount of air-moisture by damping the borders, paths, and walls in the morning and afternoon on fine days. Avoid a close moist atmosphere at any time, especially at night. Examine the inside border, making sure that there is no deficiency of moisture. If necessary afford a thorough supply of water or liquid manure to weakly trees. The surface soil is often deceptive, being kept moist by syringing, therefore supply enough to moisten the soil through to the drainage, for surface moistening does little good. Trees often have weakly blossoms, and fail to set in consequence of water being given to the tops of the trees instead of to the roots. Remember, a sodden soil is just as bad, or worse, than a dry one, therefore guard against extremes either way. If there is a superabundance of blossom buds remove those on the under side of the trellis or shoots by drawing the hand the reverse way of the growths. This will materially assist the swelling of the remaining buds. If there be any trace of aphides fumigate the house on two or three consecutive evenings. Protect the outside border with leaves and a little litter, but not so as heat, in order to keep the soil from freezing, for in such condition the roots can only imbibe soil-moisture.

SUCCESSION HOUSES.—Where the roof lights are moveable it is much the best plan to remove them, and expose the

trees to the elements for the winter, the wood being thoroughly ripe. This is inimical to many insects, especially brown scale, and the trees are insured rest and thorough moistening of the border. Even latest and unheated houses are best treated in this way, often having the effect of causing the trees to retain their buds, which cast them under fixed roofs, and the blossoms are generally finer than on trees that are kept constantly evaporating from the young wood through the time they are at rest under fixed roofs, or when they are subject to alternating rests and excitements where plants are grown in the house. The fogs and damp of winter, with the drenching rains and snow suit Peaches and Nectarines in well-drained soil, the trees being invigorated and the soil nourished. If the houses have fixed roofs, ventilate the house to the fullest extent in all but very severe weather. Proceed with the pruning, bringing matters to a close in respect of cleansing the house and trees as soon as possible.—ST. ALBAN'S.

Weather Notes.

Sussex Weather.

The total rainfall at Abbots Leigh, Haywards Heath, for the past month was 2.03in., being 1.57in. below the average. The heaviest fall was 1.10in. on the 27th. Rain fell on thirteen days. The maximum temperature was 57deg on the 9th, the minimum 27deg on the 20th. Mean maximum, 50.01deg, mean minimum, 37.02deg; mean temperature, 43.51deg—a little above the average.—R. G.

November Weather at Belvoir Castle, 1903.

The prevailing direction of the wind was W.; total ten days. The total rainfall was 1.89in.; this fell on twenty-two days, and is 0.51in. below the average for the month; the greatest daily fall was 0.56in. on the 27th. Barometer (corrected and reduced): highest reading, 30.649in. on the 5th, at 9 a.m.; lowest reading, 29.076in. on the 27th, at 9 p.m. Thermometer: highest in the shade, 55deg on the 12th and 24th; lowest, 23deg on the 19th; mean of daily maxima, 48.30deg; mean of daily minima, 36.20deg; mean temperature of the month, 42.25deg; lowest on the grass, 19deg on the 19th; highest in the sun, 89deg on the 23rd; mean temperature of the earth at 3 feet, 47.10deg. Total sunshine, 89 hours 20 min., which is 27 hours 28 min. above the average for the month; there were six sunless days.—W. H. DIVERS

Notes from Newton Mearns, N.B.

During the past week exceptionally severe weather has been experienced. On Sunday frost set in with much intensity, and overnight 15 degrees were recorded. On Tuesday and Wednesday similar readings of frost were registered, and curling was engaged in in most places. On Thursday there was a slight fall of snow, but at night a very decided thaw set in, and snow gave place to a heavy rainfall. On Friday and Saturday we had a mixture of weather: snow, rain, sleet, and frost, alternately; and in many places the roads are a perfect sheet of ice, making traffic a difficulty. Although at present there is every sign of keen frost again, yet the barometer is low, and unsettled weather may be looked for for some days to come. Outdoor labour is at present at a standstill. So far as the garden is concerned, nothing can be done under such climatic conditions, but the covering of herbaceous plants, Roses, &c., should be attended to without delay.—N. R.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
November and December.										
Sunday ...29	N.E.	deg. 41.2	deg. 37.9	deg. 46.3	deg. 39.0	Ins. —	deg. 45.7	deg. 47.5	deg. 50.0	deg. 32.8
Monday ...30	N.E.	33.8	32.7	35.7	31.8	—	43.9	47.5	50.0	27.3
Tuesday ... 1	N.E.	33.7	32.6	38.0	31.4	—	42.2	46.8	49.9	26.5
Wed'sday 2	N.W.	32.6	30.6	39.3	29.0	—	40.9	46.0	49.8	19.0
Thursday 3	S.W.	37.1	32.9	45.6	23.8	0.16	39.2	45.3	49.5	16.3
Friday ... 4	S.W.	43.5	42.5	46.3	37.0	—	40.8	44.5	49.3	32.3
Saturday 5	S.E.	27.0	26.5	34.0	26.8	—	39.9	44.5	48.9	19.5
MEANS ...		35.6	33.7	40.7	31.3	Total. 0.16	41.8	46.0	49.6	24.8

The weather has been dull and misty, with sharp frosty mornings, and a thick fog on the 5th inst.



****** All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.

CATALPA WOOD (H.).—The wood of the Catalpas is very light, but of a pleasing greyish-white colour, and has a fine texture. It requires to be thoroughly seasoned, and is then reputed to be durable, taking a brilliant polish. No doubt you might have many articles of domestic utility constructed from the tree when the wood is properly seasoned.

GRAFTING VINES (A Working Gardener).—The Grape sent is the Black Morocco, which is a good late Grape, requiring stove heat to ripen it perfectly, and special care in setting its berries, a globule of liquid frequently forming on the stigma and impeding fertilisation. This moisture should be removed by gentle agitation, so that the pollen may come in contact with the stigma. You may graft or inarch any of the Vines you name.

DESTROYING WEEDS ON GRAVEL WALK (G. Foster).—Dissolve 1lb of powdered arsenic in three gallons of cold water, stirring until it boils, then add seven gallons of cold water and 2lbs of crushed soda. Stir the whole well whilst boiling, and with a rose watering-pot apply to the walks in dry weather from March to May. An inclining board should be placed so as to keep the hot liquid from the grass or Box edgings. The quantity named is sufficient for 25 square yards. Carbolic acid has been recommended to our correspondent for the purpose. We should be obliged by particulars as to the quantity and mode of application.

BEGONIAS FOR WINTER (O. S.).—All the species and varieties may be propagated by cuttings, and may be inserted at any time when a brisk bottom and top heat, say of 75deg to 80deg, can be maintained. The precise time for insertion must be determined by the size of plants that you desire. If you wish to have large specimens, and have heated structures for growing the plants, you may insert the cuttings during February and March. If smaller plants are coveted, May and June will be soon enough for propagating, and a cool frame kept close will be suitable for the plants during the summer. An ordinary mixture of loam, leaf soil, decayed manure, and sand, is suitable for growing these plants. The old plants can either be thrown away or repotted after they have flowered. Young plants are usually the most satisfactory.

PEAR TREES UNHEALTHY (Amos).—Judging from the spur sent we suspect the cause of the unhealthiness of your trees to be ungenial and possibly water-logged soil. If the soil is wet drain it thoroughly to a depth of 3ft, having a clear outlet for the water. If the subsoil is not wet, then the condition of your trees is attributable to poverty of the soil. The remedy in this case is to remove the surface soil, just bareing the roots, and cover them with the best soil you can obtain, and over the soil place a good covering of rich manure. Limewash the trees, or, what is equivalent, dust them with dry lime when the branches are wet. If blossom buds predominate over wood buds remove some of the former, especially taking off any at the tips of the branches. Your aim must be to induce clean healthy young shoots, not permitting the trees to blossom profusely, and your trees will regain their vigour.

FORCING LILY OF THE VALLEY (E. D. Lyon).—If you require Lilies of the Valley early, the crowns are best forced in bottom heat. A bed of leaves about 3ft high is usually required, and in this the pots are placed, covering with about six inches of dry loose leaves. It is much better if a frame and lights be placed upon the leaves, which throw off rains and maintain a more equable temperature; besides, it may be necessary in severe weather to line the sides of the frame and bed should the heat decline, which ought not to be less than 75deg, nor exceed 90deg. When the flowers have grown 4in to 6in above the pots the covering should be removed, and the plants be placed in a light position in a stove, where they expand and attain colour. We have seen them successfully forced by placing a rough frame of boards around the pots, and over that some boards so as to form a cover, leaving 6 to 8 inches of space from the surface of the pots to the boards, covering with leaves or litter about a foot to 15 inches deep, removing the Lilies to a warm house when the flower spikes were 6 inches long.

PROPAGATING EPACRISES, HEATHS AND CAMELLIAS (W. P.).—Epacris and Ericas are propagated by cuttings of about 1½ to 2 inches in length. The tips of the shoots when of that length are inserted in pots half filled with drainage, some rough peat placed over it, the pot filled to within half an inch of the rim with fine sandy peat, and the remainder with silver sand pressed firmly; water thoroughly, and a few hours afterwards put in the cuttings, and cover them with a bell-glass, placing in a cold pit or frame, shading from sun. Camellias are increased by grafting upon stock of the single kind. Cuttings for stocks require to be of the ripe wood, inserted firmly in sand, kept in a close frame for a month or six weeks, and then placed in a gentle bottom heat. The plants you name can be bought from the trade growers more cheaply than they can be propagated in private gardens.

MAKING AN ASPARAGUS BED (A. C.).—This is best done at the end of March or early in April, being the best time also for planting. If the ground is common loam and well drained, or having a subsoil of gravel or chalk, nothing more is needed than to trench the space intended for the bed, and to mix with the soil as much rich thoroughly decayed dung as can be worked in. Have only two rows of plants in each bed, as this enables them to be cultivated and cut from easily. Set the rows out 2ft apart, stretching the line and drawing with a hoe a drill on each side of it sufficiently deep for the roots to be extended on each side of the little ridge which is thus left between the two drills, and on which ridge the plants are placed. Their roots being equally divided on each side, nothing more is required than filling up the drills with a hoe or rake. The plants should be chosen when they have started into growth 2 or 3 inches; they should be forked out carefully and their roots not allowed to get dry after being taken up. No heads should be cut the first year after planting, and very few the second.

NAMES OF FRUITS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (F. T.).—1, Cox's Pomona; 2, Bismarck; 3, Allington Pippin.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (J. L.).—1, Browallia speciosa; 2, Costus ignei; 3, Begonia sanguinea. (J. T.).—1, Cestrum (Habrothamnus) aurantiacum; 2, Grevillea Thelemanniana; 4, Oncidium incurvum. (F., S. Hants).—1, Araucaria Bidwelli.



Thorn Hedges.

The common White Thorn (*Cratægus Oxyacantha*) thrives so well in this country and makes such an excellent fence when it is properly tended, that it is without doubt the best form of enclosure where low cost and durability are to be combined. It grows well on all good and deep soils, but fails on very thin and stony, or very dry, sandy soils. It has been an old axiom amongst farmers that a good Thorn hedge is a sure sign that the land is worthy of good cultivation, and anyone going over a prospective holding should bear this fact in mind, and beware of the farm the fences of which are declared by the agent to have been neglected, but which may really be a number of danger signals to those who can see them. We do not suggest that farmers are never negligent about their hedges. On the contrary, such is often the case; and for want of timely cutting down, fences adjoining pastures are allowed to become gappy, and ultimately expensive to keep in an effective condition. The excuse is that the shelter could not be spared. That may have been true, but there could be no reason why a portion could not have been taken off, and the remainder at intervals. These big, old hedges are useful as shade when they are on the south or west side of a pasture, but they give but little shelter from the wind when they are on the north or east, for the simple reason that the lower portion has no foliage upon it to break off the cold winds.

It should not be forgotten that a Thorn fence, to be effective, should be widest at the bottom and taper to the top, and this shape is more easily attained when the Thorn plant has been planted in double rows, at least two feet from each other. Three feet of space between the rows may not be at all too much to allow where strong hedges to turn bullocks and horses are

desired. After planting, which should be done during open weather, as early as possible after October, young White Thorn must be well fenced from rabbits and sheep, as well as from cattle, &c. This causes the planting of young fences to be an expensive business, for posts and rails are not picked up in the street; but if the money that the rails would cost be spent in good rabbit wire, 3 feet or 4 feet wide, it may be used as a protection against all comers, and last for many years and for a succession of new hedges.

It is not sufficient to keep live stock at a distance. Couch-grass, Thistles, Nettles, &c., are equally inimical to the growth of young Thorns, and though their hardy nature may enable them to successfully contend with all such enemies, yet the progress made cannot compare with that which follows proper attention to weeding by hand, hoe or fork. After planting no trimming or pruning is required, the only and important attention being that of weeding. This is in case the plants have been put in single rows. But if the double row planting has been practised, we should recommend that the branches on the inner side of each row should be trimmed off after two years' growth. This plan will prevent crowding, facilitate weeding, and encourage outward growth. It will also make possible a mulching with compost between the rows. If this be done every autumn until the fence gets too high, much will be done to lay the foundation for a vigorous and sturdy hedge. A cartload goes a long way, and even such a small protection to the roots is most beneficial.

Having planted a young fence and got it into proper shape and of good height and width, too often we see such a one trimmed or twigged year by year until its roots have lost all their vigour, and the hedge gradually begins to die away. The soil or situation is usually blamed, but the real cause is the continual cutting back of the young wood. The plants being deprived of their proper lung power lose their vigour and die away. No matter how necessary a neat appearance may be, the hedge must occasionally be allowed to go for two or three years. The roots will be immensely benefited, and when the hedge is cut back again to its neat shape, in due course it will grow better than before with its lease of life immeasurably lengthened. There are two ways of killing hedges as well as the use of the stub: one is continuous trimming, and the other is continuous neglect.

Farmers do not sufficiently allow for the great expense which bad fences entail. To keep small, closely-trimmed hedges in a state to turn sheep often costs a great deal in pales and stakes. We have seen such hedges presenting a very neat and tidy appearance, but on examination they would be found largely artificial. As we said before, we do not believe in very high hedges as shelter, but sometimes such are necessary to protect a homestead from high winds. In such cases a certain limit should be put to their height, and they should be kept well sided up every other year: topped one year and sided up the next.

We have often written against the unnecessary plashing or laying of hedges. Farmers are in such a hurry to have a competent looking fence, that they spoil their hedges for the sake of present security. Of course, if a hedge is cut close down, as we recommend, there is the labour of making a strong protective beard of the Thorns, but if the cost of stakes be reckoned, we think plashing proves the more expensive, and a beard may be needed in any case. If a hedge is taken off at the proper time, *i.e.*, when the field adjoining is coming fallows, there will be two years for it to grow on that side before sheep will come against it; so there will be only one side to protect, and if there be a ditch on that side the task is made still easier. Farm labourers are great lovers of plashing, and we do not wonder at it, for it provides a never ending supply of firewood and kindling for them to secure in the future as they return from work.

Work on the Home Farm.

Two snowy days, followed by 14deg of frost, have sharply reminded us that the period of autumn is past and winter has commenced. Although frost will be most beneficial as an antidote to the floods, we could have well put off the date of its appearance until Christmas. We had planned another piece of Wheat drilling, but now it may be given up altogether. We certainly cannot carry it out unless there is a very rapid change. The frost has been sufficient to stop ordinary land work, but we are able to plough the lea, which has been lately manured for the 1904 Potatoes. We are using chilled ploughs with three horses in each. The furrows turned are twelve inches wide, and vary between 8in and 9in in depth. This is none too deep, but we are going to the full depth of the good soil, there being a bed of fine gravel below. The ploughs do the work well, all being finely

covered, and the land left fairly open, although not so rough as it would be after the steam-plough. The horses are by no means overworked, and each plough is doing 1½ acres per day. We are saving the steam-ploughing at 10s. (which would not be over-much), to allow for a man and three horses, but we also save the coals and the carting of water for the engine. There is, therefore, a balance in favour of the horses. Yet we should prefer the steam tackle if we could always get it when required.

Many Potato pies are being turned over, but few are being sent to market. There are so many foreign Potatoes in our markets that English do not appear to be required at present. £4 per ton, and in some cases a few shillings more, is the price now being taken for well-dressed samples. How many Potatoes remain in the land was shown the other day in a neighbour's field, when a surprising quantity was laid bare by the Wheat drill, and harrows which followed it.

Now is the time to look well to the young horses. They must have something more than frozen grass. If farm work is not sufficient to keep all the working horses employed, and they perforce have a rest, a portion of their corn may with benefit be diverted to the young ones out at grass.

Young sheep, being now well inured to a Turnip diet, may have their cake and lamb food reduced, but if the weather continues cold they must have some dry food. Hay and clover are cheap and plentiful, but we should prefer cut straw and a little barley meal mixed with it, especially if we possessed some Barley of the unsaleable type.

PRIZES FOR AGRICULTURAL ESSAYS.—The Chemical Manure Manufacturers' Association is offering four prizes of £10, £5, £3, and £2 respectively for short essays on "The Utility of Superphosphate, used either alone or in conjunction with other manures as a top-dressing for pastures and grass lands, and with special reference to its influence on the milk-producing and stock-carrying capacity of the land to which it is applied." Further particulars will be supplied to intending competitors on application to the Secretary, the Chemical Manure Manufacturers' Association, 79, Mark Lane, London, E.C.

ROYAL SCOTTISH AGRICULTURAL BENEVOLENT INSTITUTION.—This Institution, which was founded in 1897 in commemoration of the Diamond Jubilee of the late Queen Victoria, and of which His Majesty the King is patron, and the Duke of Buccleuch honorary president, has been making progress and doing good work. From its last report it appears that the funds, although they have increased year by year, are not adequate to meet the numerous pressing claims upon them, so many as twenty eligible applicants having to be refused on this account. The main object of the Institution is to provide pensions of £20 per annum to aged or infirm and necessitous persons (male and female) connected with agriculture in Scotland, who, through no fault of their own, have been reduced to a condition of poverty. The directors appeal to all interested in agriculture and others for contributions to the funds, to enable them to deal with these and other new cases which are constantly arising. We are informed that the pensioners hail from practically every county in Scotland, and that some of them are upwards of ninety years of age. Full particulars regarding the Institution and its pensions can be had on application to the secretary, Mr. Isaac Connell, S.S.C., 10, North St. David Street, Edinburgh.

WEBB AND SONS' STAND AT THE LONDON CATTLE SHOW.—The exhibit of roots, &c., made by Messrs. Webb and Sons, the King's Seedsmen, Wordsley, Stourbridge, can only be described as wonderful. It comprises specimens drawn from the successful crops in this firm's Annual Root Crop Competition, which showed returns of upwards of 78 tons of Mangolds per acre, and 61 tons of Swedes grown by the application of Webbs' Special Fertilisers. The produce of Webbs' Pedigree Seeds has also been eminently successful at all the important shows. Perhaps the most remarkable roots are those of Webbs' Imperial Swede, which are massive in size and of beautiful shape and quality. It has secured the Champion Prize this year at both London (61 entries) and Birmingham (30 entries), besides a vast number of other important awards. Webbs' Invincible Turnip and Webbs' Selected Green Globe Turnips, both of which won first prizes in their class at Birmingham last week, combine large size, with perfect shape, a remark which equally applies to Webbs' New Arctic Swede and Webbs' New Buffalo Swede. Messrs. Webb also exhibit the new and improved cereals which they have raised by cross-fertilisation and selection, their systematic experiments having been most successful. The Kinver Chevalier Barley, for instance, is recognised as one of the best varieties in cultivation, and in addition to its success at the Brewers' Exhibition, already noticed, it has recently won the Colchester Gold Cup, first prize, Norwich; first prize Edinburgh, &c. Webbs' Newmarket Oat also maintains its reputation as the most profitable variety to grow. A very fine collection of Potatoes is exhibited, and among them we were particularly struck with a kidney-shaped variety, recently introduced and named Webbs' Guardian, which it is confidently predicted has a great future before it.

Bunyard's Fruit Trees

THE NEW DESCRIPTIVE CATALOGUE

Is now ready, and will be sent free for 6 stamps.

The Stock is superb this year, and embraces all the best kinds in every fruit, for Outside or Glass Culture.

ROSES are included in the above.

The Trees are very fine.

THE GENERAL NURSERY CATALOGUE

of CONIFERS, SHRUBS, and TREES, in 2,000 varieties—free.

GEORGE BUNYARD & CO.,

LIMITED,

Royal Nurseries, Maidstone.

GRAPE VINES in POTS

Extra Strong Fruiting and Planting Canes in all Leading Varieties.

FIGS IN POTS

All Leading Sorts.

Bushes and Fan-trained for Walls.

DICKSONS Nurseries CHESTER

The STANCLIFFE ESTATES Co., Ltd.,

Stancliffe Nurseries,

DARLEY DALE, Near MATLOCK.

CONIFERÆ and other ORNAMENTAL TREES

Comprising—Aucuba, Box (tree) Cryptomeria, Genista, Juniper tamariscifolia, Pernettya, Pyrus Aria, Cupressus, Retinospora, Weigela, Lilac, Hawthorn, Holly, Laurels, &c.

RHODODENDRONS (High class named varieties,

Seedling Hybrids, and Alpines) and other

AMERICAN PLANTS.

CLIMBERS—Virginian Creeper, Clematis, Ivies

(large and varied quantity), &c.

FRUIT TREES, HERBACEOUS AND ROCK

PLANTS. FOREST TREES.

Immense Variety. Superior Quality. Prices Moderate.

LANDSCAPE GARDENING AND

TRANSPLANTING of LARGE TREES a SPECIALITY.

Catalogue Free on Application.

PLANTING SEASON.

We invite the attention of Planters to our large and Superior Stock of FOREST TREES, FRUIT TREES, ROSES, RHODODENDRONS, HOLLIES, and Shrubs of all kinds.

OUR CRAIGMILLAR NURSERIES

are the most exposed in Britain, and produce Plants which cannot be surpassed for Hardiness and Health.

New Catalogue Now Ready, and will be Posted Free on application.

DICKSONS & CO.,

The King's Nurserymen,

1, WATERLOO PLACE, EDINBURGH.

No. 1225.—VOL. XLVII, THIRD SERIES.

CLIBRANS HARDY CLIMBERS

ESTABLISHED IN POTS.

THE following is a selection from our List of Hardy Climbers. Charming effects can be produced by using them to cover walls, pergolas, arbours, arches, summer houses, &c. All are strong, healthy, established plants.

- Actinidia arguta*, a strong, quick-growing species, 1/- and 1/6 ea
 „ *kolomikta*, a rare species producing white flowers, 1/- and 1/6 ea
 „ *polygama*, flowers waxy white, foliage brightly tinted in autumn 1/6 ea
Akebia quinata produces fragrant flowers 1/6 to 2/6 ea
Ampelopsis hederacea, the well known Virginian Creeper, 1/- and 1/6 ea.; 9/- and 12/- per doz.
 „ *Veitchii*, a popular species, it clings most persistently to walls, woodwork, &c., 1/- and 1/6 ea.; 9/- and 12/- per doz.; extra size, 2/6 and 3/6 ea
 „ *Veitchii purpurea*, the leaves differ from the type in the fact of their being of a greenish purple, 1/6 and 2/6 ea
 „ „ *atropurpurea*, much deeper in colour than the former 1/6 and 2/6 ea
Aristolochia sipho, dark handsome foliage, vigorous grower 1/6, 2/6, and 3/6 ea
Bignonia capreolata produces reddish yellow flowers, 1/- and 1/6 ea
 „ *grandiflora*, rich orange scarlet flowers 2/6 ea
 „ *radicans*, orange scarlet flowers, strong growers, 1/6 to 3/6 ea
Bridgesia spicata, a vigorous growing evergreen creeper, clings tenaciously to wood or walls 1/- to 2/6 ea
Humulus lupulus foliis aureis, a pretty golden leaved variety of the common Hop, vigorous grower, 1/- and 1/6 each; 9/- and 12/- doz.
Jasminum nudiflorum, a well known winter bloomer, producing yellow flowers 1/- and 1/6 ea
 „ *nudiflorum fol. aureis*, a golden variegated form of the preceding 1/ and 1/6 ea
 „ *primulinum*, a newly introduced species from China, the flowers are similar in colour to those of *nudiflorum*, but are much larger. It is also an evergreen. F.C.C., R.H.S. 5/- and 7/6 ea
Lonicera aurea reticulata, emerald green leaves, prettily netted with gold 1/- and 1/6 ea
 „ in variety, choice sorts 1/- to 2/6 ea
Menispermum canadense, large, heart-shaped foliage, 1/- and 1/6 ea
Polygonum Baldschuanicum, a gloriously beautiful climber, producing glossy green leaves and elegant clusters of pale pink flowers 2/6 and 3/6 ea
Smilax aspera } two bright glossy, green-leaved plants,
australis } with prickly stems 1/6 and 2/6 ea
 „ *Vitis coignetiae*, an attractive species, producing large handsome foliage 2/6 and 3/6 ea
 „ in various choice sorts 1/6 to 2/6 ea
Wistaria japonica, a white flowered species, strong grower 2/6 to 3/6 ea
 „ fl. pl., a double flowered form 2/6 and 3/6 ea
 „ *multijuga*, lilac flowers, produced in exceedingly long racemes 2/6 and 3/6 ea
 „ *alba*, similar to preceding, but produces white flowers 2/6 and 3/6 ea
 „ *sinensis*, lovely lilac flowers, excellent climbers, 2/6 to 3/6 ea
 „ *alba*, white flowered form 2/6 to 3/6 ea
 „ fl. pl., double flowers 2/6 to 3/6 ea
Clematis, choice and beautiful varieties, our selection, 10/6 to 15/- per doz
Ivies, our collections include all the best varieties—
 Collection A, 6 in 6 pretty, distinct sorts 4/6 and 7/6
 „ B, 12 in 12 pretty, distinct sorts 9/-, 12/6 and 15/-
 „ C, 24 in 24 pretty, distinct sorts 18/- and 31/6
 „ D, 12 beautiful sorts, consisting of 5 bronze, 5 silver, and 2 golden varieties 12/- and 18/-
 „ E, 5 beautiful bronze varieties 4/- and 7/6
 „ F, 5 charming silver varieties 5/- and 7/6
 „ G, 5 pretty, small, green-leaved varieties 3/6 and 7/6

For COMPLETE LIST of all Hardy Climbers, Trees, Shrubs, Roses, &c., see

OUR TREE AND SHRUB LIST,
GRATIS AND POST FREE.

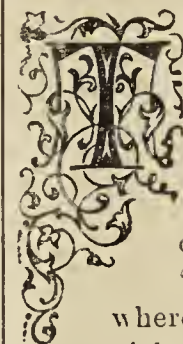
ALTRINCHAM & MANCHESTER



Journal of Horticulture.

THURSDAY, DECEMBER 17, 1903.

Lessons of the Year.



THE great storm in February of this passing year will not hurriedly pass from the minds of the present generation. There is, indeed, sufficient evidence in the many thousands of "tall ancestral trees" still lying where they fell on that memorable night, to make any immediate reminder of its fury necessary. Yet, surely, some lesson, some good, can be extracted from the evil which blots the landscape, and, possibly, lessons, too, from the sunless and saturated conditions which have prevailed.

First, however, to our trees. At a rough calculation from local data, ninety per cent. of the total wreckage is represented by Elms, the remainder chiefly consisting of Horse Chestnuts, Sycamores, Limes, and Poplars. In a long belt of Beeches fully exposed to the violence of the gale, no casualties occurred, and the same immunity was observable amongst specimen Oaks, Turkish and common, which escaped with merely some wrenching among their branches. Hoary specimens of the Evergreen Oak, then in luxuriant leafage, and which bore the full brunt of the blast, only suffered to the same extent.

Whilst occupied in the first consideration after the storm—viz., clearing blocked roads and avenues—a visitor propounded the rather pertinent question "If Elms suffer so much, and other trees escape, why are Elms so much planted?" No use in pointing to a veritable monarch of the tribe which, for a century at least, had braved all the winds that blow ere that eventful night laid it low—that did not answer the question; so again may it be asked in view of such lamentable results and the ever present possibility of the recurrence, Why are Elms so much planted? It is partly answered, but only partly, in remarking that the Elm is a popular

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

tree, in fact the most commonly grown timber tree of Europe, and this owing, probably, to its easy cultivation, rapid growth, and adaptability to various soils and situations, as well as possessing the power to thrive in smoky localities.

That the Elm is capable of attaining sufficiently magnificent proportions as to render it historical is evidenced by the report of one being cut down by Sir Hans Sloane at Chelsea, about the year 1720, which, measuring 13ft. in circumference and 110ft. in height, was said to have been planted during the reign of Queen Elizabeth. Doubtless, too, many fine specimens still exist over the area of the British isles, but the fact remains that superb avenues of the common Elm, *Ulmus campestris*, which a few years since proudly ornamented many a grand old demesne, are now merely the wrecks and relics of departed glory. It is not only the time-honoured, and those full of years which have succumbed, for the storm swept away Elms of all ages and in all stages of growth, either by ruthlessly uprooting them or splintering off their stems midway like matchwood. Much, I am aware, could be done to save fine trees in lightening heavy tops by severe pruning, but, alas! it seldom is done, and in sequence the question again crops up, "If Elms suffer so much, and other trees escape, why are they so much planted?"

Truly, "knowledge comes if wisdom lingers." Necessarily in a well-timbered demesne, variety is expected, although this consideration did not always obtain with planters of yore. For instance, in this particular locality is a fine old estate known as Elm Park, and rightly named, for until the storm of February last its primary feature was the magnificent Elms with which it was literally studded; but very few, however, then escaped, and it is now strewn with the prostrate giants. "How are the mighty fallen!" As the trees consisted solely of Elms, this venerable place might now be aptly re-named Bare Park, especially as there is nothing coming on to replace the ancient Elms. There is plenty of evidence in enormous discs of soil and roots now standing vertical, as the giants toppled over and upheaved them, to show that the Elm is a shallow rooter, but, and as previously remarked, where the roots stood the strain something had to go, so the trunk in that case was simply splintered off.

The merits of *Quercus cerris*, the Turkey Oak, may well claim more consideration from planters than it appears to do; its straight, graceful habit of growth making it a most desirable tree for demesne planting, whilst its storm-resisting qualities, with the commercial importance of its beautifully grained timber, are points not to be overlooked. In planting, present effect more than future utility is too often regarded. One generation plants with vague ideas of prospective timber, the next reaps a sure and certain crop of firewood. Possibly but few, at planting time, look far enough into the future to weigh its sequential probabilities.

A wet season is credited with being detrimental to Potato culture, and rightly so. Is it not also inimical to the Potato blight?—viz., does *Phytophthora infestans* flourish in wet, retentive soil? This question is asked in all seriousness, for in spite of the well-known rapid development of the scourge under warm, humid conditions, on several occasions this season it has been a matter of surprise to see perfectly sound tubers lifted from cold, saturated soil. In one instance this occurred recently (last week in November); hence, from the somewhat meagre data available, the conclusion is arrived at, rightly or wrongly, that in an excessively cold, wet soil, *Phytophthora infestans*, if it exists, is unable to flourish to any harmful extent.

Effects of the year's abnormal rainfall must be more or less pronounced upon the land. Ill-drained pastures are already showing this to an appreciable extent in mossy growth, and the necessity of clearing out and keeping clear, watercourses, ditches, or what not, for the quick removal of the superfluous, cannot fail to have impressed its importance. To more or less extent the excessive irrigation must be detrimental to soil fertility in carrying away soluble nitrates. Defective drainage resulting in waterlogged soil cannot, either, but militate seriously against healthy vegetation in the near future. In gardens and pleasure grounds this season has plainly shown any weak spots in the surface drainage, and, as opportunity occurred, measures have been taken to rectify defects.

Deep stokeholes often give serious trouble if not properly drained, and draining them is sometimes a difficult matter. Experience of one bad example in which, on exceptional occasions, all-night pumping had to be resorted to, led to urgent steps being taken, a few years since, to remedy the nuisance. It proved a difficult and laborious task, a trench 8ft. deep, and 150yd. in length, having to be cut through a shrubbery abounding in tree roots ere sufficient fall could be obtained. Glazed drain pipes, of 4in. diameter, with cement joints and inspection chambers at intervals, completed the job for all

time, and one cannot but think, in a season such as this has been, how good and excellent a thing it is to have one's drains in order. Troubles in other directions show how futile was the practice our forefathers resorted to in making stone "shores" to carry off a rapid rush of surface water, owing to the percolation of tree roots through the interstices, and the eventual choking of the drains. Such loosely-made drains are, obviously, advantageous for a time by affording lateral drainage of the subsoil in their immediate vicinity, which the glazed pipe does not, but their final choking is a serious matter, and of two evils, choose the least.—A. N. OLDHEAD.

Practice, with Science.

"One million sterling annually, to the true practical and sympathetic education of the farmer [and gardener], or, rather, the farmer's son, during all those years of two full generations that the inertia of ignorance was thrown into one scale (i.e., the inorganic) would have paid the British nation magnificently. Such education should have begun in the very year of the repeal of the Corn Laws. Yet a challenge was recklessly thrown to the world to do its worst, and was accepted. The effects have become relentlessly manifest."—H. H. RASCHEN, "Journal of Horticulture," page 529, Dec. 10.

National changes are now in progress, and if the agriculturists and horticulturists of this country will sufficiently bestir themselves, some of the evil effects of past negligence and apathy may be remedied, and the science of horticulture (which is agriculture in a more intense form) will inevitably become an indispensable national factor and asset, potential with results that are all for good.

Our pages have recently recorded what assistance each of the county councils throughout the United Kingdom is furnishing toward horticultural instruction, and in this place we would briefly outline the more permanent horticultural provisions that are now in vogue at various centres. One of the chief of these is at Holmes Chapel, Cheshire, where State aid is given; another is at Chelmsford, Essex; a third at the Uckfield Agricultural and Horticultural College, Sussex, and one at Reading. These are the localities where horticulture receives permanent, and fairly adequate, attention. No other counties in England, not even Yorkshire or Devonshire, seem to have large permanent school-gardens in operation with properly equipped laboratories and class-rooms.

Attention was called in our pages some weeks back to a proposal that the South-Eastern Agricultural College at Wye, Kent, should endeavour to establish a horticultural branch, with class-rooms at, or very near to, Wisley, where the new garden of the Royal Horticultural Society is situated. If this becomes accomplished, as it doubtless will, this southern centre may very probably occupy the premier position in the teaching of the principles and science of horticulture within the United Kingdom, and it has also been suggested by the Scientific Committee of the Royal Horticultural Society that a qualified director be appointed by the Society for its new garden, to conduct experiments appertaining to horticultural botany, as well as other researches, so that the joint influence and operation in connection with such a society would certainly endow this "London" centre with ruling and leading powers.

A School of Forestry is another proposal made from Wye, and this also would be established at Wisley. Such a school has been long proposed for Scotland, the headquarters for the teaching of forestry being at Edinburgh, where Colonel Bailey delivers regular courses under the direction of the Edinburgh and East of Scotland College of Agriculture.

The present discussion in the *Journal of Horticulture* and other gardening papers, on the need for a gardeners' association or guild, makes it opportune to review the educational work having a direct horticultural bearing. The purely practical gardener—the rule-of-thumb man—looks askance at schools and colleges, and at theoretical instruction, and makes many uncomplimentary references to inaneness, in students undergoing the curriculums. But those who have closely read the letters that discuss the present proposition (the gardeners' association) will have noticed that agreement is general on one point, namely, that the social status of gardeners should be raised. That is the point grasped by all; and the means to the end is this: Provide better-educated probationers. The colleges, therefore, will undoubtedly do good, for they turn out young men of mettle, who have had a training fairly broad in its scientific and practical aspects, and they are supposed to be imbued with both the desire and power to add to their knowledge; and thus they are superior to the average under-gardener, whose daily toil is often laborious, and whose training or instruction, according to the strict application of the meaning of both these words, are left to his own initiative. Of course, just as "science is starved," so may the scientifically-trained gardeners be, but, at all events, the educated man commands respect.

Turn we now to describe some of the features of the existing colleges, and from the reports and prospectuses of the institutions mentioned in the opening lines, we have selected the following

particulars, which are typical of the courses of instruction at these places.

At the Agricultural and Horticultural Training School and Farm, Saltersford Hall, Holmes Chapel, Crewe, the staff includes:

(1) Principal, who is lecturer on agriculture and agricultural chemistry, and manager of farm, and conductor of experiments.

(2) A lecturer on land surveying and levelling, farm mechanics, book-keeping, and assistant to the principal in agriculture.

(3) A lecturer on chemistry and analyst. (4) A lecturer on natural sciences, mathematics. (5) A lecturer on veterinary science.

(6) A lecturer and instructor in horticulture, and head gardener. (7) A teacher of drawing. (8) An instructor in practical woodwork and carpentry. (9) A drill sergeant. (10) Matron of the school.

"The course of work and study laid down for the students may be described as theoretical work in the shape of lectures, &c., during the mornings and practical work during the afternoons. Practical work includes not only taking part in the various operations on the farm and in the garden, or on the experimental plots, or management of the cattle, &c., as they occur throughout the year; but the land surveying, practical chemistry, woodwork, &c., forming part of the curriculum. The practical work in the garden is under Mr. Neild, while that in the laboratory receives the attention of Mr. Thompson, and the biological work that of Mr. Eastham. The practical work is obligatory on all."

"An important side of the work at the School is the attention given to gardening in all its branches, and excellent provision is made for such in the gardens, which cover seven acres, and are fitted up with orchards of young fruit trees, and a considerable range of glass houses for the culture of Grapes, Melons, Tomatoes, Cucumbers, flowers. Considerable attention is also given to the cultivation of bulbs, while the propagation of fruit trees, and of grafting, is made a special feature. The cost of providing this agricultural and horticultural School was necessarily great; the amount so expended at Holmes Chapel being £13,437."

Essex.—"The aim of the County School of Horticulture is to impart sound elementary instruction in the best methods of cultural treatment, based upon a knowledge of the structure and physiology of plants. The School is organised to give courses of systematic laboratory and garden instruction to two kinds of pupils. (1) To pupils who are unable to attend the School for more than three or four weeks at a time; and (2) To pupils desirous of obtaining a full year's course of continuous instruction. The classes meet daily for lectures, demonstrations, and practice."

"(1) Short-term courses.—A complete junior course of instruction is given in the four terms corresponding with the four seasons of the year. Three of these terms last for three weeks each, and one of a more advanced character lasts for four weeks. In the intervals between the short-term courses, students are supposed to be engaged in gardening and putting into practice the principles and methods taught at the School."

"(2) Ordinary School course.—The ordinary School course includes at least one year's continuous instruction, and is divided into three terms: (1) Autumn term (September—December). (2) Winter term (January—April). (3) Summer term (May—July)."

The fees are: (1) Short-term courses: Essex county students, free; outside students, £1 per week. (2) Ordinary school course: Essex county students, £15 a year; outside students, £20 a year.

The laboratories accommodate 44 students. They are well lighted, heated and ventilated, being provided with lockers, kits, microscopes, tables, and there is a good library of books useful to horticultural students. A small greenhouse is attached to the laboratory for the convenience of students in their observational and experimental work. Visits are made from time to time to nurseries, fruit farms, and market and private gardens, for purposes of demonstration and study, in the summer field excursions are organised for the study of open-air botany.

The garden covers an area of three acres, and is entirely devoted to educational uses. It is divided into five main sections. (1) A botanical garden, in which the plants are systematically arranged in Orders, according to the natural system of classification. (2) A vegetable garden well stocked with all useful English-grown vegetables in season. (3) A fruit plot A, for growing varieties of fruit, and demonstrating different forms of trees. (4) A fruit plot B, to be used as an orchard. (5) An experimental plot for trials of new plants and competing varieties. In addition to these five main sections there are: (6) The borders, forming a very distinct feature of the garden. The south border is furnished with a representative collection of shrubs, and the east and north borders with Conifers and forest trees. (7) The Rose garden, consisting of seven beds, each representing a different class of Rose. (8) Plant houses, consisting of a range of greenhouses, including a propagating pit, a vinery, warm and cool plant-houses, and frames. A working bench is provided for each student, which he is expected to keep tidy, and a numbered set of tools which he is required to keep clean. Bins are provided for the different kinds of soils, &c., and a right place for everything, and students are requested to avoid disorder. Each student provides himself with an apron, and with pruning and budding knives.

At Uckfield, Sussex, there are good lecture-rooms, splendid

analytical and bacteriological laboratories; a botanical room with appurtenances, carpenter's shop, and the residential portion of the college contains every convenience for a healthy and enjoyable life. The gardens extend to nearly five acres, and is sectioned on the lines indicated in the Chelmsford notice, above. Fruit-bottling, and the drying and preserving of various fruits and vegetables, we are glad to see forms a feature in the curriculum.

From the foregoing, it will be seen that Great Britain—England, we ought rather to say—has of recent years come to recognise that agriculture and horticulture demand more than mere empirical application, in order to successfully meet foreign competition and practice, and though the advance made is utterly inadequate to the needs of the times, yet will we hope on, and strive each to do something toward the transfusion of that spirit for efficiency, for which Lord Rosebery pleaded two years ago.

Carnations and Begonias.

Winter-blooming Carnations.

Messrs. George Boyes and Co., of Aylestone Park Nurseries, Leicester, show banks of Carnations at a number of the Chrysanthemum shows in November, in various parts of the country. When Mr. Boyes, the head of the firm, was at the Crystal Palace Show some three weeks ago I got him to mark a few of the best out of the many that he grows, and they are as follows: Stanley Weyman, a free flowering, large scarlet, the best in this colour; Dr. W. G. Grace, another bright scarlet, the largest scarlet yet sent out, a larger bloom than Lawson. It is beautifully scented, and a strong, vigorous grower, giving abundance of bloom on long stiff stems; "As far in advance of all other scarlets as Grace was in advance of all other cricketers," says Mr. Boyes. When once before the public it will cause a greater sensation than Lawson, which is surely saying a good deal. Then there is A. J. Webbe, still among scarlets, the edges being serrated or fringed in the true American style, and it is sweetly scented. Also Hon. A. Lytleton, an exquisite salmon coloured variety, very free flowering. Lady de Trafford was one of a set sent out in 1902, and is spoken of as the best of that lot. In colour it is clear red, magnificent in size, and is "sure to take." Lastly we have Lady Carlisle, magnificent pink, one of the largest, clearest, and most solid pinks yet seen, and sweetly scented. One bloom is quite sufficient for an ordinary buttonhole; it wears well and keeps its shape after cutting. Lord Kitchener is a very large and splendid crimson. All of those here named are trees for winter blooming, but they vary considerably in price. What beats the Carnation?

Ware's Tuberous-rooted Begonias.

The display of these choice and increasingly popular greenhouse and bedding plants at the Bexley Heath Nurseries of Messrs. T. S. Ware (1902), Ltd., is worth half a day's journey to see. The most gorgeous colour scenes on the stages of theatres hardly eclipse the brilliance and richness of the beds side by side and stretching away for a quarter of a mile under the orchard trees in the nursery first named. The varieties are assorted into unitary colours, and it would not be a bad idea at all if here and there a private garden could utilise some of the spare space that is generally to be found by planting it up with breadths of these radiantly rich dwarf flowering plants. Messrs. Ware cultivate about 100,000 of the tubers in this open-air fashion, there being nearly twenty long and broad beds, and the range of colours embraces crimson, scarlet, pink, salmon, bronze, white, yellow, magenta, blush, and orange, though that does not even complete the entire list. Many of the plants are grown for the supply of seed, but the majority, of course, are for the tubers, which everybody can manage without much fear of failure, and the sorts can then be guaranteed true to name. Of new varieties I would name Mary Pope, a grand, Camellia-shape, double white; Queen Alexandra, a beautiful Picotee type; Mrs. W. G. Valentine, a large double crimson; Miss Barbara Ray, a double of a dark, intense orange hue. There are also Countess of Cadogan, a golden-orange; Lord Rosebery, rich deep crimson; and Mrs. Andrew Tweedie, Camellia-shaped and cream coloured: a gem. With these, there was a magnificent collection of double and single flowered seedlings in flower little over a month ago, notwithstanding the rain, the winds, and the cold weather. What beats a double Begonia?—J. H. D.

A PIT-MASON DUCHESS.—I, for one, thought the "Pit-Mason Duchess" (and I am English!) quite funny enough to smile at—a very harmless thing to smile at, too. It reminded me of a little incident that occurred to myself a few years back. An old man (a rare old vegetable grower) invited me to see a fine bed of Cabbages. I naturally asked him the variety. He replied: "Dan's Siance"! I puzzled over his answer for an instant, when it struck me that Daniels' Defiance was intended. Daniels' Defiance is a grand Cabbage with cottagers, and Pitmaston Duchess is a grand Pear in some soils.—P.S. I fancy "Pit-Mason Duchess" and "Dan's Siance" would be something for Dean Hole to smile at.—A. B.



Lælio-cattleya × Decia.

Many charming hybrids have emanated from the nurseries of Messrs. J. Veitch & Sons, Chelsea, and among these may be included the beautiful Lælio-cattleya × Decia, a bloom of which is depicted in the illustration. This is the result of a cross between Cattleya Dowiana aurea and Lælia Perrini, the first named being the pollen parent. In many respects the flower resembles a Lælia more than a Cattleya, except in size. The sepals and petals are very pale rose, the lip at the base being rosy mauve, with a deep purplish crimson lobe. This fine hybrid is being frequently exhibited by Messrs. J. Veitch and Sons at the Drill Hall, Westminster. A First-class Certificate was awarded for it by the Orchid Committee of the Royal Horticultural Society.

Cœlogyne (Pleione) Lagenaria.

Perhaps a few remarks on the treatment afforded this pretty little Intermediate House Orchid may not be out of place at this season. Let the pseudo-bulbs be repotted so soon as new leaves begin to appear (if this operation has not already been carried out), which is from the same point as the flower previously occupied, as by that time new roots are beginning to push somewhat freely. A compost I have used with very good results consists of peat, two parts; sphagnum, one part; half-decayed leaves, rough and flaky, one part; and a little silver sand, charcoal and dried cow manure. Shorten the old roots, leaving enough to hold the "bulbs" in place, and pot them level with the rim of the pot, burying the "bulbs" up to the neck, as the new ones will be much higher when they develop. I find the cooler end of the Cattleya House suits them very well so far as temperature is concerned, and water may very sparingly be given until growth is active. When the roots have permeated the soil thoroughly I find an application of weak, liquid cow manure, at each alternate watering, very beneficial, never allowing the compost to get really dry before affording water when the plants are in full growth. —GROWER, North Wales.

The Troubles of an Orchidist.

The woes dealt out to mortals are many from the first,
But the troubles of an orchid man must surely be the worst!
For when the fever smites him with its stony, mailed fist,
There's no escape left open—he's a full-fledged orchidist!

He'll ponder over price lists; he'll burn the midnight oil,
And he'll send all o'er creation for sample peat or soil;
He'll argue till he's tired on the merits of his way,
How and when to sun or shade 'em, 'till there's nothing left to say.

He has some fine Angraecums, an Oncidium or two,
Fifty-seven kinds of Dendrobies and a Vanda, real true blue;
He has lots of Catasetums and a Stenoglottis pink,
No end of Epidendrums and Calanthes, too, I think.

His *Miltonia speciosa* is the finest in the State,
And his *Cypripedium* hybrids are—well, they're simply great;
He imports *Odontoglossums*, *Cattleyas* by the score,
Has forty *Lælia* crosses and *Cymbidiums* galore.

The costly *Phalaenopsis* and the *Isochilus* queer,
The lovely *Sophranitis* and the *Spathoglottis* dear;
There's a *Brassavola glauca*, and an *Ionopsis* too,
Such a charming *Microstylis* and an *Aërides* that's new.

There's a pot of *Bulbophyllum* that's enough to drive one frantic,
Masdevallia cucullata and *Stanhopea* gigantic;
There's *Sobralia Amesiana* and *Phaius* rich and rare,
And a *Chysis Langleyensis*—but I really must forbear.

For were I to go further and enumerate the lot,
'Tetanus would seize me—I'd expire on the spot.
These, and many, many others are the symptoms of his plight,
And he's happiest among them, be it morn or noon or night.

Oh the woes dealt out to mortals are many from the first,
But the troubles of the orchidist must surely be the worst!

—("American Gardening.")

Decorations with Orchids.

At the visit of the Italian monarchs Orchids only were used to decorate the Royal table at the Guildhall luncheon. Between three and four thousand of the dainty and costly blooms were arranged in gold stands specially designed for the occasion, representing the Italian colours of green, white, and red. The other twenty-six tables were embellished with Carnations, white Lilac, Roses, Lilies, and Chrysanthemums—in all about 9,000 blooms—or a grand total of between 12,000 and 13,000 Orchids and less important flowers. To a generous

corporation the cost is of secondary importance. When the King and Queen lunched in the Guildhall last year the sum of £270 15s. was spent on flowers.

Cultural Notes: Lælias and Cattleyas.

Lælia albida, now pushing its flower spikes, has puzzled cultivators more, perhaps, than any other of the Mexican species belonging to this favourite genus. It does not possess the strength of its compeers *L. autumnalis* and *L. anceps*, and, while moving along vigorously for a few years after importing, soon feels the strain of having an unnatural atmosphere about it. I have tried *L. albida* in all sorts of receptacles and in various temperatures, and my experience points to a medium or Cattleya house temperature in winter and an airy, moderately dry house in summer, as likely to lead to the best results.

A trellised block is suitable as a rooting medium, covering this thinly with equal parts of sphagnum moss and peat or leaf soil. Singularly enough, the strain of flowering does not appear to have any ill effect, or but little, upon the health of this charming plant, but something indefinable and quite mysterious in our artificial treatment is not to its taste. My advice is to flower it as freely as may be, always provided that the plant is strong and well rooted. To flower it at all before properly established is wrong. The soft white scale that affects it must be fought by sponging frequently, or good health is out of the question.

L. majalis is quite at rest now, and should be suspended in a light, cool place until signs of growth appear. Then place it rather suddenly in warmer quarters, but without much atmospheric moisture, when every young lead will be found to contain a spike of its very showy and yet refined flowers. Plants that are kept moving in winter never flower at all freely, and this is equally true of other and larger-growing Lælias. The popular *L. purpurata* is never so free as when the growth finishes up in autumn, rests in winter, and comes right away to the flowering stage in spring.

Cattleya citrina is becoming active, and must be given a cool, moist, and light position. The natural position of the growth, apparently upside down, is a protection to the forming spike in the young lead, preventing moisture from collecting therein. Still, a lot of syringing is not advisable, especially during dull, wet weather. Like the species named above, *C. citrina* does not relish a lot of compost about its roots. It should never be forced to grow when it seems inclined to rest, or vice versa, but the plants watched individually, and retarded or encouraged as seems necessary. Puncture or abrasion of the leaves during cleaning operations must be studiously avoided. —H. R. R.

The Liliaceæ.*

(Continued from page 493.)

The three genera of Chlorogaleæ are *Bowiea*, *Chlorogalum*, and *Nolina*. *Bowiea* is a curious monotypic genus, closely allied to *Scilla* by its flower and bulb, yet mimicking the growth of *Asparagus*. *Bowiea volubilis* was sent to Kew 1862. It was planted in the Succulent House, and when it produced its long, slender stems it became an interesting object to botanists. It produced flowers the second year. The genus was named after Bowie, formerly a collector for Kew, at the Cape of Good Hope. The bulbs of *Chlorogalum pomeridianum* are used as a substitute for soap in California. A visible benefit might be the result of its cultivation in the Transvaal.

The next section to be considered contains the caulescent genera, i.e., those with leafy stems and capsular fruit. They have never an introrse dehiscence of the anthers, in this respect differing from the typical Liliaceæ. This group contains the showiest plants of the Order, including a large amount of garden forms which in their wild state are chiefly restricted to the N. Temperate regions. The tribe Tulipeæ, which we will now consider, comprises 200 species in six genera. The three most important are *Lilium*, *Fritillaria*, and *Tulipa*.

Lilium.

Amongst all hardy bulbous plants the species and varieties of this genus stand first; their graceful habit and rich colouring making them invaluable for decoration either as cut flowers or border plants. They are derived from all parts of the Northern hemisphere, and are mostly found growing in fairly good soil, and in association with shrubs or other plants which shade their roots, keeping them cool, and at the same time preventing excessive evaporation of moisture.

The majority thrive best in soil rich in humus, though some give excellent results in ordinary garden soil, and others again will hardly exist except in peat. When planting, however, it is advisable to place a layer of fibrous peat below the bulbs, and to envelope the bulbs with sharp sand. The depth they should be planted at depends upon situation and variety. In a protected situation the bulbs of such forms as *L. parvum*, *Greyi*, and

* A paper read before the Kew Gardeners' Guild by Donald MacGregor. The sequence is based on Mr. J. G. Baker's classification.

nitidum need not be deeper than 3in, whilst giganteum, pardalinum, monadelphum, may be put to a depth of 8in.

Where there is a choice of situations they ought to be accorded a position which is shaded from the direct rays of the mid-day sun. Associated with Rhododendrons, Bamboos, and other elegant plants which do not rob the soil of moisture, they produce a superb effect, enhancing the beauty of the shrubs in return for the protection received. One of the most pleasing combinations is *L. tigrinum splendens* in a bed of *Cornus alba* var. *Späthi*.

According to their requirements they may be classed under four headings. Firstly, those that thrive in a moderately light soil, as *L. candidum*, *testaceum*, *chalcidonicum*, *longiflorum*, *elegans*, and *dauricum*. Secondly, those that require a deep,

EULIRION.

The Burmese species are the handsomest in this section. A white flowering form is *L. Wallichianum*. Closely resembling it, but differing by its dwarfer growth and the possession of a greenish tint on the exterior of the perianth, is *L. Neilgherrense*. *L. sulphureum*, a handsome yellow-flowered species, may be best described as a yellow flowered *Wallichianum*, from which it differs by its slender anthers and its copious production of bulbils in the axils of the leaves. *L. ochroleucum*, and *Wallichianum* var. *superbum*, if not identical with *sulphureum*, differ but slightly.

Three other Burmese species possessing a shorter, more cup-shaped perianth are Nepalese, attaining a height of from 6ft to 7ft. It has the interior base of the perianth blotched with



Lælio-cattleya Decia.

stiff soil, as *L. tigrinum*, *Humboldti*, and most of the *Martagons*. Thirdly, those that require a peaty soil are *L. Browni*, *Greyi*, *monadelphum*, *rubellum*, and *pardalinum*. Fourthly, tender forms requiring the protection of glass houses. According to Mr. Baker's Monograph, the genus is divided into six subgenera.

Cardiocrinum.—Leaves stalked, flowers funnel-shaped.

Eulirion.—Leaves sessile, flowers trumpet or funnel shaped.

Archelirion.—Flowers open, with deeply spreading segments.

Isolirion.—Flowers erect, falcate.

Martagon.—Flowers pendulous, and falcate.

Notholirion.—Stigmas distinctly trifid.

CARDIOCRINUM.

Lilium cordifolium is the type of this section. Its sub-species, *giganteum*, was first flowered by Messrs. Cunningham, Fraser and Co., Comely Bank Nurseries, Edinburgh, in 1852. The plants, which were raised from seed received five years previously, attained a height of 10ft in an open border. This is a common plant in the damp forests of the Himalayas, where it grows in a rich black mould, the bulbs being always close to the surface. From its stem musical pipes are made by the natives. *L. mirabile* has a centrifugal inflorescence, a character previously unknown in the genus.

deep violet. *L. Lowi*, incorrectly called *L. Bakerianum*, has a somewhat similar flower, but a dwarfer habit. *L. Bakerianum*, which was first described by Collet and Hemsley (Trans. Linn. Soc.) from dried specimens collected by Collet, produces two flowers, copiously brown-spotted on the inner basal half, and on erect peduncles. In character it is intermediate between *L. dauricum* and *japonicum*, with flowers resembling *odorum* in shape. These three species are very slightly different.

L. longiflorum and its varieties are useful plants either for greenhouse or beds. The variety *multiflorum* is the best, and rapidly is superseding the "Bermuda Lily" (*L. l. Harrisii*). *L. Browni* has more scattered leaves, and a purplish tint on the exterior of the perianth; its varieties *Choloraster*, *platyphyllum*, and *leucanthemum* are all worthy of extended cultivation. The latter variety (*leucanthemum*) is erroneously called *japonicum* var. *Colehestri*. *L. japonicum* and its variety *Alexandrae* differ but slightly from *Browni*. *L. rubellum*, a rosy pink species, deliciously fragrant, should be in every collection, its flowers being produced in May, and are very acceptable, coming in after the spring flowering bulbs are past. Forming a connecting link between this section and the *Martagons*, we have *L. primulinum*, a pale yellow form, introduced in 1890.

(To be continued.)

Credit.

BY THE MAN WHO SERVES THE KITCHEN.

I had just thought out my subjeck for this artikel, Mister Heditor, and had ritten the 'eadline along the top as usual, wen th' missus spied me.

"Jim," she said, in a rasping voice that sounded like a band saw at full speed, "I'll ha' none o' that. Credit's a thing as I allus set my face agen, and all the years as we've bin marrid I never would ha' anything to do wi' it, but allus paid ivereverything as we owed of a Saterdag night, as soon as you come 'ome wi' th' brass, which is more than some wives can say, as gets things on tick reg'lar, and for you to begin to rite to th' jernel about credit is a refleekshon on me, and I won't 'ave it, so there"—and by way o' emfasiss she took 'old o' wot few 'airs is left on th' top o' my 'ead, and give 'em a smart rench.

It took me some little time to drive it into her that the credit as I purposed riting about had nowt to do wi' runnin' up bills, getting things on strap, and all that soart o' thing; but that there wos another kind o' credit, which is th' credit due to th' 'orny 'anded sons o' toil, as does th' real work in gardens; an in ritin this artikel I posed as th' champion o' garden laberers generally, and kitchen garden men in partiklar.

"Jim," says th' old girl, as she looked at me, kind o' sideways, wi' a smile similar to that which (barrin the rinkles) used to set my 'art flutterin' in our coortin days—"Jim," says she, "your'e a geenis, and if ivver th' day comes when a garden labour candidate sits i' th' 'ouse of commons alongside o' John Burns, why, you'll be the man. I allus thort as you were born for summat better than kitchen servin'."

I let th' old woman ramble on, and now as she's gon' to attend th' mother's meetin' at th' vicarage, I can get on wi' my skribin'. I'm tempted to take up this subjeck, Mr. Heditor, 'cos in reedin' artikels in th' gardenin' press, ritten I guess by gardiners ('ead gardenirs, I mean), I notis that there's a very big "I" runs through most on 'em. It's "I" do this and "I" do that, till one really begins to wonder wot th' chaps occupys their time with as gets sixteen shillin' a week and dines in th' pottin' shed.

Now I ain't got a word to say agenst 'ead gardeners as a class, but wen they're diskussin' their triumphs it would be just as well if they wouldn't use that "I" quite so much, and giv' a bit o' credit to th' 'umble labourers; and wen anythin' turns out a failure they needn't be quite so hangshus to impress on their frends that it wos all owin' to a blunder on th' part o' one o' th' men.

Bein' a man o' contented mind, it's most amusin' to me when our 'ead gardener walks round wi' th' lady, takin' no notis o' your 'umble servant, p'raps on my knees in a Salary trench, wi' one eye and both ears open, listenin' to th' way in which he enlarges on his kitchen garden management, but rarely do I 'ear a word as refleks any credit on Jim.

I wonder sometimes where gardenirs 'ud. be wi'out th' labourers, spechully them young 'uns as is brought up under glass like a forced Cowcumber, and arter doin' a few years o' jurnyman-ship and developin' inter forman they bust inter bloom as full-fledged gardeners, "well up in kitchen garden manijment," as th' advertisements say. I've 'ad one or two o' this kind to deal with in my time, and they begin o' tellin' me as they thought o' makin' me a kind o' kitchen garden foreman (but said nothin' about th' wages risin' along wi' th' soshal position), and o' course, bein' a foreman (wi' a couple o' lads under me), I should be responsible for my department. A grand chance for me, I thought, but said nowt, and certainly I didn't 'ave much interference till th' young boss saw 'ow I worked me gaarden and kept kitchen supplied, arter which he began to take quite an interest in wegetabels, and proposed that we should do this or do that till at last I began to see as I wos a foreman in nothin' but name, eksept when th' missus complained o' th' cook grumbled, and then in a quiet corner o' th' Onion bed I wos given to understand wot my responsibilities wos. You may take my word for it that labourers has taught gardeners more than th' latter is prepared to admit when they get together at th' refreshment bar at a flower show.

They tell me that th' old preemium sistem is mostly done away wi', but never 'avin' 'andled eny o' th' fivers paid by young gardeners for their two years' instrukshun, I can only speak from 'earsay. At th' same time, I've 'ad to do wi' th' instrukshun part o' the business. We had a 'ead gardener once who was a mark on preemiums. He wanted to keep up th' callin' o' gardenin' to a high level, he said, and wos mighty partiklar never to take a youth unless he was prepared to fork out his preemium o' five pound or so. It was most important, so th' 'ead gardener said (after he'd got his fiver) that youths should be well versed in th' rewdiments o' kitchen gardenin', so by way of a start they were sent along o' me for a year or so, arter which they were promoted to pot crockin', and so on till they got charge of a greenhouse all on their own, and w'en dressed up of a Saterdag ni't they 'ardly knew Jim. Some of 'em took to gardenin' all right, and others might ha' saved their five pounds; but I've often wondered how th' 'ead gardener earned his money. If they larnt anythin' in th' kitchen garden I reckon that I did th' teachin', and once wen I

mildly suggested somethin' reward I wos informed that th' receevin' o' premiums wos one o' the privileges of a 'ead gardener's position. Wot I say is, that if it 'ud 'a bin any lowerin' o' th' gardenin' perfession for me to receive any o' th' preemium, I think I might ha' be'n given credit for some o' th' tooterin', and I say the same for my feller kitchen garden men of similar expeerience.

My contension is, Mr. Heditor, that a kitchen garden man ain't a hordinary labourer. Th' 'ead gardener may be a good wegetabel grower, or he may not; but th' responsibility o' th' kitchen garden man remains. Wen he goes 'ome o' night he may leave his work behind him; but he can nivver resine himself to th' arms o' morpheus and rest his 'ead on th' pillar wi'out wonderin' wether slugs are makin' themselves fat on th' seedlin's as he's pricked out that day, or whether th' blite ain't settlin' 'is Potaters. Agen, it falls to 'is un'appy lot to keep th' peace atween cook an' 'ead garden'r, and, in short, to be the real motive power that keeps th' kitchen garden macheen a-runnin' smoothly.

We'll say that eighteen shillins' a week is th' average wage for a kitchen garden man, which no one can say is a princely sum, though, mind you, I ain't complainin' about wages. Credit's the thing I'm plumpin' for just now, credit for a class o' men as is largely responsible for th' teachin' o' young gardeners and releevin' 'em o' much anxiety wen they're matoored, an' if I raise my voice on behalf o' my feller workers it ain't done in a contenshious spirit; all we want is fair do's and no favour, but there, I hear a meshured footstep on the cobbled stones as leads to th' front door o' my domestick establishment. It's th' missus returnin' from th' mother's meetin', so I'll stop as she's sure to have a few choice bits o' gossip for me when she gets in. Mothers' meetins is rare places for news.

Violets, Princess of Wales and La France.

"The most beautiful single Violet," says the author of "Sweet Violets and Pansies," "is undoubtedly that named Princess of Wales." This variety is a very vigorous grower, good for the open border, and should be allowed plenty of space for its large leaves to develop, 3ft each way being none too much for the young plants in spring, for they need it all (if generously treated) ere the time for planting arrives in September. They may be placed into stout, drip-proof frames, or in open-air beds, but the frames are preferable. Pot culture is not so generally resorted to. It is of service to the "small man," whose accommodation is so limited that he must seek variety in ways that are economical, or for large gardens where pot Violets are sought after. Young plants may either be potted into large pots right away in April, or lifted and potted about the beginning of September, the after-treatment being such as ensures the coolest possible conditions, and, also, the avoidance of dampness, or, on the other hand, the least suspicion of dryness; and the plants must be in the enjoyment of full light. It is not absolutely necessary that they be within a few inches of the glass, though in frame-culture this is advisable. The Sweet Violet requires a perfectly pure atmosphere.

Princess of Wales was introduced a few years ago from Hyères. The flower is almost Pansy-like in size and appearance, of a lovely blue, and both strongly and sweetly scented. The stems are often 12in long, and if there is space for only one Violet in the garden, Princess of Wales should be chosen.

Some keen growers of Violets have objected to the rampant leafage of this variety, and its unnecessarily long stalks, but while La France, for instance, is neater and tidier, it does not throw so many flowers, and, of course, that is not what is desired. As a pot Violet, none will beat Princess of Wales, and Mr. Brotherton, in a note to the *Journal*, page 36, July 10, 1902, says that it flowers with him in pots during the summer (June and July). In the note referred to, he adds: "In addition to flowering so late, it is possible, by allowing the runners to grow after the plants have been housed in autumn, to secure a second crop of blooms from these, flowers being produced from the axils of each leaf." We would welcome short notes on Violets at this season.

The second variety (and which is figured about half natural size), is also delieiously fragrant, and of a deep blue colour. The flowers are over an inch across. Some growers, of course, favour this in preference to the other. It also makes a good pot or frame variety, and is very generally grown.

The inclusion of Violet classes at winter exhibitions is very commendable, and at the small shows frequently held by mutual improvement societies, the Violet generally receives attention.

THE GOLDEN-ORANGE and the crimson varieties of *Celosia pyramidalis* are always used to grand account mixedly in borders by themselves in Hyde Park, and the edging is of mossy *Saxifraga*. A bed of *Lilium speciosum album* is choice, and the mixed beds of foliage and flowering plants are at all times beautiful.

Notes on Hardy Plants.

Primula frondosa.

Some time ago I drew attention to the fine *Primula rosea*, one of the most brilliant of our hardy Primulas. The one I desire now to notice is very different in its attractions, inasmuch as it is not what we can call a showy flower, but one which has yet many points of beauty to commend it. It is, however, mentioned as being linked to *P. rosea*, not closely botanically, but by reason of its doing well under almost similar conditions. Not that it requires so much moisture, for it is more accommodating, and will thrive and flower well in a drier position, especially if shaded.

I find, however, that it is more vigorous, increases more freely, and flowers better when in a place where its roots are constantly wet, such as the margin of a pond or stream, where the moisture is always in contact with its roots. My attention was first drawn to its likings in this respect by seeing a group in the rock garden at the Edinburgh Royal Botanical Gardens, where the plants which were most shaded from the sun were the most vigorous. A desire, also, to test an impression growing in my mind, that the farinose Primulas preferred more moisture than the others, led to testing this pretty little Balkan Primrose in a sunny position on the margin of one of my Water Lily pools. The result has been very satisfactory, the large plant now there being finer than one in a shaded border which is comparatively well drained and free from standing moisture. One desires, however, to state that the experiments with the farinose Primulas are not yet exhaustive enough to confirm or refute the idea that all like so much moisture, although *P. frondosa* certainly does.

Primula frondosa is, as one would think, very properly included in the section *Farinosæ* by Dr. Ferdinand Pax, in his exhaustive monograph of the genus *Primula*, of which a good English translation would be a great advantage to English-speaking admirers and students of the genus. It is thus classed along with the following species—*involuta*, *sibirica*, *pumilio*, *egalicensis*, *Olgæ*, *longiflora*, *scotica*, *stricta*, and *farinosa*. It is very liberally supplied with a white farina, which not only covers with a beautiful silvery whiteness the under part of the leaves, but generally extends, though less plentifully, over the petioles, a portion of the upper surface and the midrib. The stems and pedicels of the flowers are also covered with this flour-like farina.

The flowers themselves are individually small, but are fairly numerous. They are called blue, I observe, in one work, but one cannot say that they are anything but purple or purple-rose. The leaves, which are, as the specific name of *frondosa* would indicate, numerous, are narrowed to the petioles, and oblong or lanceolate. The plant, as grown in Edinburgh and that in my own garden, agree with the work of Dr. Pax, already referred to, and also with Widner's *Die Europäischen Arten*

der Gattung *Primula*, a very complete account of the European Primulas, but differing in the names of its classes from Dr. Pax's, *P. frondosa* and others being classed under the section *Aleuritia*.

This season *P. frondosa* has come earlier into bloom than usual, but its flowers generally open here during the month of April. It is a pleasing little Primrose, peculiar to the Balkan Peninsula, and perfectly hardy with us.

Veronica virginica.

Veronicas are notoriously difficult to name with any certainty, and the herbaceous section presents fully as many difficulties as any

other, especially seeing that these plants vary much from seeds and hybridise freely. In the case of *Veronica virginica*, we have, however, one which is very distinct and easily identified by those who have seen it once or twice. It has, indeed, been separated by some botanists from the genus *Veronica*, and has shared with another *Veronica* the possession of that called *Leptandra*. Nuttall being the authority for the distinction. The great "Index Kewensis" follows Linnaeus in calling it *Veronica virginica*, but we find that Britton and Brown in their valuable "Illustrated Flora of the Northern United States and Canada," follow Nuttall and describe it as *Leptandra virginica*. Whatever the ultimate decision of botanists, we may well for garden purposes content ourselves with the old and familiar name, for it is a *Veronica* to all intents and purposes, and so easily identified that there is no gain by giving it generic rank.

Veronica virginica is one of the most ornamental of the herbaceous species, and is a really handsome plant when occupying an isolated position in the border or associated with dwarfer plants, so that its handsome proportions and its fine verticillate foliage can be fully displayed. Even before it flowers it is admired for its habit, and when the tall stems, decorated with their fine serrulated leaves, are surmounted by the fine spikes of flowers, the whole effect is striking in the extreme, especially when the plant is a well grown one, and reaches a height of 6, 7, or even 8 feet in height.

The colour of the type is often described as white, but it is frequently bluish in its native habitats, which are in meadows, moist woods, and thickets throughout a great part of Eastern Canada and the Eastern United States. Some nice varieties have been raised, and one of the prettiest and most ornamental I have seen was raised or selected by Rev. C. Wolley-Dod at Edge. I have practically discarded the others in favour of this one, which has fine spikes of lilac-blue flowers.

One advantage of this *Veronica* is owing to the fact that it is so easily cultivated as to grow in almost any soil, though, of course, it attains more impressive stature when growing in a strong and moist one. In the ordinary border it is not always possible to give it as much moisture as it would like, but there it ought to be well manured with farmyard or stable manure, and have also humic matter.

For wild gardening it is well adapted, but the timely staking it may require in exposed places is not always informal enough in appearance for this form of gardening in its highest phases. There is no difficulty in the propagation of *Veronica virginica*, as it is easily raised from seeds or increased by division of the roots in spring or autumn. The best forms should be propagated by the latter method, but cuttings of young growths in spring and summer can also be readily struck, especially if a gentle heat is at command. Like many other plants this *Veronica* has its "popular" names. One of these is "Culver's Root," but it has also been known as "Black Root," and as Culver's



Violet, La France, in a pot. ($\frac{1}{2}$ nat. size).

Physic.—S. ARNOTT. [A short notice on other of the herbaceous Veronicas appeared in our issue of last week, page 529.]

Plant Perfumes.

The perfumes of certain flowers affect the digestion or breathing, or cause dizziness, and even fainting fits. Vanilla is troublesome to many, so is the white flower of the *Ligustrum japonicum*, and the *Pittosporum*. The Tuberose, Jasmine, and Lilac are objectionable to some. The *Datura arborescens* makes people drowsy. This action of flowers is due to the scent, and is distinct from the influence of pollen, which produces hay fever.

Modern Progress in Horticulture.*

"There never was a period when the science of gardening was so universally and so ardently cultivated as it is at present." This statement is as true to-day as it was when Speechly wrote it in the preface of his celebrated treatise on the Grape Vine, published in 1790—over a century ago. We must never forget, however, that individual opinions are apt to be rosy or drab, according to the good or bad position or circumstance in which the individual who expresses them is placed for the time being. Environment influences men's judgment, as it also does many other things. The highest point to which any art or craft can rise is not altogether expressed by the highest and best results attained by any one gifted individual, or even by a small set of individuals, but rather by the highest average excellence attained by the whole community. When we try to judge of horticultural progress, we must be clear as to what the main premises really mean. We may also ask if garden progress has risen all along the main trunk or line, or whether some particular branches have not been improved and elevated to a higher standard than others.

Well, on the whole, I think that *upward* progress in all ways, however great, has really been *less* than is generally supposed, and that what many call progress is rather a *wider diffusion* or outspreading of good culture. In a word, we have probably a hundred good gardens to-day for every ten good gardens of fifty years ago, this increase being due to improved trade, better education, and other social and economic conditions. The richest people in England to-day are not all aristocrats and landlords, and many of our best present-day gardens really belong to merchants and others connected with our manufactures and export or import trade. When we look at the particular branches of horticulture we find that there is nothing stable: everything is in a transition stage as the years go by. Broadly speaking, it is best for horticulture that fashion and tastes, or hobbies, should thus change from time to time. It brings into focus new things, new interests, and affords opportunities for new and able men of all classes. In the garden there are certain products that nearly all *must* have, such as fruit and vegetables and hardy flowers; and then there are things which middle-class people *may* have, ending at the top of the ladder with horticultural luxuries which only the rich *can* afford to grow or otherwise obtain.

In 'exotic flower culture especially, change has been and is still rife. Gone are the huge and more or less complete collections from most, if not actually all, large nurseries, because they are no longer popular in private gardens—Ericas, Cape Pelargonias, Ferns, hard-wooded plants from the Cape and Australia, and many other special things. "Bedding-out" is much modified, and the growth of elephantine exhibition plants has nearly ended to-day. Even the so-called "florist's flowers" as florist's flowers are on the wane; so also with hybrid perpetual or "show Roses," so-called, and many other, once popular things.

Of course these things still exist, and the best of them are often grown far more largely than before, but not for exhibition purposes. In a word, gardening has been, and is, very largely influenced to-day by a deep and healthy and much broader public taste than ever before in our history. Cultivated and artistic people do not like to see show Roses and Chrysanthemums stuck hard and fast into stiff wooden boxes, nor Pansies and Carnations in paper collars to-day. We can most of us remember how the late John Gibson, of Battersea Park, modified the bedding-out arrangements there by what has since been called sub-tropical gardening. Then we had the still existing change in favour of hardy herbaceous and rock or Alpine flowers.

The Narcissus hobby, again, has occupied attention for years, and still exists, even if perhaps a little less fervently than a year or two ago. The Iris, the Pæony, and the Viola have had and retain popularity, just as did the Auricula, the herbaceous Phlox, the Hollyhock, the Anemone, the Ranunculus, the Pansy, and the florist's Tulip before them. We had hardy wild gardening as an improvement on half-hardy sub-tropical bedding, and now many are practically expressing a taste for flowering trees and shrubs, for Bamboos: indeed, the Bamboo garden, or "Bamboosery," the pergola, the water-garden for choice coloured Water Lilies and other aquatics, and the moraine bed or border seem present-day rivals of the pinetum and the wire temple roseries of other days. We have had a Sweet Pea and a Dahlia revival, and now that Daffodils, excepting the best, of course, are on the wane, we are to have the Garden Tulip as a coming flower.

Plants of to-day must be decorative or both beautiful and useful *selections*, and not merely formal or curious *collections*, and, as often happened in the past, both difficult and expensive to cultivate. Owners of gardens to-day do not emulate the botanical gardens, as did those at Woburn, Chatsworth, or Knowsley in days ago; and for this very reason our botanic

gardens, with their full collections, hold an interest for us now that they scarcely ever held since the early history of botanical gardening began. Selections useful and beautiful *versus* collections curious and rare are the order of the day. Very few country gentlemen now ever think of planting a "pinetum," as so many did fifty or more years ago; and still the best of Conifers are sold in much larger numbers to-day than ever before. This eclectic taste is true of other things. As a matter of fact, we have to-day better and more catholic tastes at work, and *the many* have now acquired the taste for planting and gardening formerly confined to *the few*. Even the poorest cottagers and allotment labourers to-day may possess a bit of garden if they care to do so.

Amongst the most potent factors of change and progress in nursery management, so far as imported Orchids, bulbs, &c., are concerned, have been the public or auction sales held in London, Liverpool, Manchester, Birmingham and other large towns. The expenses and risks of collecting abroad and the lowering of prices consequent on competition both at home and on the Continent, as combined with the effects of auction sales, have revolutionised the nursery trade formerly done in these exotics and other plants. The price of all nursery stock is lowered sooner or later by auction sales; but in the case of trees and shrubs, hardy plants, and Dutch flower roots the effects are not so apparent, as the widespread public demand is so enormous. In the case of Orchids, however, for which the demand is comparatively limited, the effects were more immediately seen. As a consequence Orchid collecting has been left in the hands of those who import expressly for sales by auction, and one result has been that those who can pay for glass houses and fuel, and afford the necessary attention and labour, may grow Orchids if they care to do so. An enormous influx of new and beautiful home-raised seedlings and hybrid Orchids is another result that has been encouraged by auction sales. In other words, new Orchids are now being raised by the thousand under glass roofs beneath an English sky. In this way the nurseryman can protect himself and his creations.

Good and beautiful as is the best of professional gardening in private places and nursery gardens, I think I may safely say that the greatest *upward* horticultural progress has been made of late years in market gardens, and especially those in which large areas are covered with glass, and having all the modern "resources of civilisation" in the shape of appliances for hastening, retarding, or otherwise growing and utilising fruits, vegetables, and decorative plants and flowers. These glass-roofed market nurseries exist near all our large towns, and they extend from the Land's End to John o' Groats. I never look over one of these extensive glass-roofed gardens—like Rochford's at Old Turnford—without saying to myself that the demands of Covent Garden and other large markets have led to some of the most remarkable phases of horticultural perfection, both practical and economic, ever seen in British horticulture.

We all know the dictum of Adam Smith, who, in writing his celebrated "Wealth of Nations" in 1776, said market gardening was a poor calling, because nearly all persons able to purchase garden produce were also able to grow their own supplies. This was probably quite true at the time, but the growth of large towns and manufactures, the increase of population, &c., have altered things, and to-day, not only is there a good open market for edible garden produce grown in England, but for imported fruit, vegetables, and flowers to the annual value of many millions of pounds as well. To grow all our own cereals, meat, and milk products, and even our own poultry, eggs, and honey, may be impossible—I do not say it really is so, but we certainly ought to be able to grow a far larger proportion of fresh fruit, vegetables, and flowers than we now do.

High and able as is the cultivation in our best of private gardens throughout Great Britain and Ireland, it is to the market gardeners that we shall have to look for the greatest success in British horticultural practice and methods. The reasons are many, but the main point is that gardening is in most private places a matter of taste: the personal equation of the owners comes in largely, likes and dislikes being many and varied. Many private gardens having both grounds and glass houses well arranged may be economically managed, but there is often a good deal of sentiment connected with them, and they are often badly arranged and are kept up just as horses and hounds, or yachts and motor-cars, and other luxuries are kept up, viz., for personal rather than for economic reasons. With the trade or market gardener cultivation is purely an economical question, and he arranges things so as to save labour, and he produces, not what he likes best himself, but that which sells best, or the things he can grow at least cost and sell for most money.

(To be continued.)

Lælia autumnalis.

The pseudo-bulbs are much wrinkled, ovate, and produce two somewhat linear, coriaceous leaves. Its rosy-purple flowers, nearly four inches across, having a pale-coloured or white lip, are borne on an erect long scape. This Mexican species somewhat closely resembles *L. crispa*, a Brazilian species, but is more slender in all its parts.

* A paper read before the Horticultural Club, London, by F. W. Burbidge, M.A., V.M.H. Printed in Journal of the Royal Horticultural Society.

NOTES

NOTICES

Appointment.

Mr. A. Grant, as head gardener to Lady Price Fothergill, Hensol Castle, Pontyfelon.

A National Potato Society.

In view of the enormous advance in the price of Potatoes this season, the heavy losses from disease, and the importance of the crop, a project has been mooted for establishing a National Potato Society. A public meeting will be held in the North Room, Hotel Windsor, Victoria Street, Westminster, on Wednesday, December 30, at 3.0 p.m., to fully discuss the matter.

Sending Flowers to the Continent.

I have frequently heard of difficulties experienced by flower collectors abroad in posting plants or even blooms only to friends in England, and there are countless tales of confiscation by custom-house officers in consequence of temporary regulations forbidding the practice, because innocent-looking parcels labelled "flowers, with ears," too often "contained contraband lace." The latest complaint, says a writer in "News," concerns flowers posted in England. A correspondent writes:—In case any of my countrymen in England have an idea of sending over a few flower roots as a present to friends in Germany, they may perhaps profit by the information afforded by the following account. A few days back a small box of about a dozen Violet roots was sent over to Germany as a present to an English lady who wanted a few home flowers in her window box. For this 1s. 3d. was paid for postage, an explanatory letter being sent separately. The lady writes in reply:—"When the notice came that there was a parcel they would not let us have it, saying they would not allow it to go out of the office, fearing an infectious disease. They informed us that the roots must either be burned there or sent back to you. I asked if I might be allowed to bring away the little bit of the lid on which you had written, and after many serious head-shakings they said yes, and actually took up the lid, brushed it well on both sides, and blew on it also." [Are really healthy plants forbidden?—ED.]

Agricultural Experiments at St. Andrews.

At the meeting of the St. Andrews and East of Fife Farmers' Club on Monday, Dr. John H. Wilson, lecturer on Agriculture in the University, gave a lecture on the results of the continuation of his experimental work during the past season. He had cultivated many varieties of Potatoes of his own raising, and found extreme variability amongst seedlings from one and the same fruit, in respect of form and colour of tuber and flower, length and duration of stem, and cropping power. A good many of the seedlings were not proof against disease, but the majority seemed disease-resisting. No means had been taken to shield the varieties from attack. In a large series of crossed Swedes, many of the varieties had proved to be of most promising character, more especially those having Sutton's Magnum Bonum as seed parent. Visitors to the plots had been much struck with the uniform excellence of a cross between that variety and Crimson King. The crosses between Swedes and yellow Turnips, which had flowered during the past season, showed great diversity of seed-bearing power. In certain of them, the plants had refused almost entirely to bear seed, and had consequently continued to branch and bloom for a long time. Other crosses, however, had produced abundance of fine seed, and it was hoped that the very desirable intermediate types of roots shown by the parents might be fixed and perpetuated. The hybrid characters were seen in the flower and capsule as well as in the root. An elaborate and expensive experiment, to test the characters of hybrid Oats which were of much interest in the first generation last year, had been seriously interfered with by the deplorable weather experienced in the past autumn. The results so far worked out showed that Oats were subject to the same principles of variation as had been demonstrated for other self-fertilised plants. In conclusion, illustration were shown of Ergots disseminated by flies, and Finger-and-toe perpetuated by Charloek. A new disease of Potatoes established in Fife was also shown. It is characterised by the formation of loose corky tumours on the tubers.—("St. Andrews Citizen").

United Horticultural Benefit and Provident Society.

The monthly committee meeting of this society was held at the Caledonian Hotel, Adelphi Terrace, Strand, on Monday evening last, Mr. Thomas Winter in the chair. Four new members were elected. Eight members were reported on the sick fund. The attention of members is particularly called to Rule 14, a member having just now forfeited his sick pay through neglecting to pay his subscriptions within the limit of seven months.

Farm Colonies for London's Unemployed.

From Poplar, a district in the north of London, we hear of a recommendation to deal with unemployed married men who possess homes in London. These homes are to be maintained unbroken if the men will at once go to work in the country. Mr. Crooks, M.P., says plainly, "Giving money to men as relief is pernicious—what is wanted is the opportunity to earn a wage." A plan running on similar lines received influential support at the Mansion House. The Bishop of Stepney wishes to see a thousand married men set to work on farm colonies at Hadleigh, Lingfield, and Osca Island; and the conference of citizens appointed a committee to arrange details for carrying out the scheme. Public support should not be wanting; and if the able-bodied men now in the workhouses are willing to embrace the opportunity of returning to work on the land, the result of their labours will be watched with the keenest interest.

Miniature Rifle Clubs.

One of the most popular rifle meetings of this year was that of the Society of Miniature Rifle Clubs, held at the Crystal Palace, from March 23 to April 1. It attracted nearly 3,000 entries, and was a pronounced success. Unfortunately, however, the Council find their funds so low that they cannot guarantee a repetition of the meeting next spring. This is disappointing, seeing the importance now attached to rifle shooting as a means of national defence, and the Council earnestly appeal for financial assistance. The Society is incorporated with that of the "Working Men's Rifle Clubs." Those who can assist it should send their subscriptions to the Secretary, Society of Miniature Rifle Clubs, 17, Victoria Street, Westminster, S.W.

Baron Sir Henry Schröder and "the Hall."

Baron Schröder writes:—"The new hall of the Royal Horticultural Society—so anxiously desired by the Fellows—is now in course of erection, and will, the Council hopes, be completed for use by mid-summer next. The total cost of the hall, offices, library, &c., including furniture, will be about £40,000, and the Council, of which I am a member, are most anxious to open the building free of debt. Towards this sum £23,000 has been contributed, of which no less than £8,471 has been given by the Council and officers of the Society. There thus remains a balance of £17,000 still to be raised. At present only about one in ten of the Fellows has contributed to the building fund. In the hope that the others will see their way to do so I have been asked to make this appeal. If every Fellow would kindly forward a contribution—some giving more and some less—the desired object would be attained, and the anxiety of the Council on this point at an end.—J. H. W. SCHRÖDER, 145, Leadenhall Street, London, E.C."

Autumn Flowers at Oakbrook, Sheffield.

For the past few weeks the gardener at Oakbrook, Mr. P. Massey, has had such a show of bloom that he may well feel some sense of pride in. At the time of our visit there was a magnificent batch of Calanthes, some spikes having 50 flowers, with others to follow; and with the pots disposed amongst Ferns and foliage plants, they had a grand effect. We also noticed Poinsettias, and a noble piece of Eucharis, with some 50 or 60 flowers. A notable feature is also what may be termed a truly royal display of Begonia Gloire de Lorraine. There are scores of plants in four-inch and five-inch pots, and in various stages of advancement, producing a veritable blaze of colour, these alone repaying one for a visit. The grand collection of Crotons is again deserving of notice; for colour, style, and variety they are certainly not to be equalled in the district. Particularly noticeable are two grand specimens of Leedsii. The conservatory, too, is a mass of flowers. The roof is profusely adorned with Cobæa scandens variegata, and below are Cypripediums, Narcissi, Bouvardias (a grand lot), Salvias, and Chrysanthemums in all varieties and colours, while in a cool house there is a very large batch of Cyclamens to follow-on for a succession of blooms. These are such that no one could wish better. The profusion of flowers that they are now throwing assures one that it will be a distinct treat to see them later on.—W. L.



New Incurved Varieties.

Desirable additions to the incurved section of Chrysanthemums are nowadays of such rare occurrence, that when a really meritorious variety is introduced it is certain of a warm welcome. The following I can recommend to any cultivator with even a limited collection.

George W. Matthew has a bronze yellow base with a clean amber yellow centre. The petals under some methods of culture are a trifle loose.

Mrs. W. Higgs in colour is silvery pink, faintly margined with rose. The full sized blooms are solid and of perfect form, quite a promising variety. William Higgs has massive proportions, building up a full globular flower. In colour it is golden fawn.

Mrs. Barnard Hankey in colour is chestnut with a deep red suffusion and stripe. It is a massive deeply built flower of excellent proportion. Miss E. Seward is a promising addition, the somewhat narrow pointed florets incurve perfectly. The colour is pleasing—bronze base with a rich yellow centre.

Miss A. Dighton has exceptionally long narrow florets which incurve perfectly. For an incurved variety it is extra large. The colour is pleasing—primrose yellow. Mrs. Frank Hannaford is best described as a much improved Major Bonaffon.

C. Blick I look upon as too much like a Japanese in every way. Its proper position is undoubtedly with the incurving Japanese section. The petals are too long, loose, and incurve too irregularly to belong to the incurved section. The colour is pleasing—pink, faintly striped with purple.

Mrs. C. J. Mee, should be in the same category, rose lilac. May Phillips in colour has a rose base with cream yellow centre. The florets are narrow, incurving thoroughly, making a full, large flower, in every way satisfactory. The King is most peculiar in colour—slate, with a purple suffusion. The petals are closely built, forming a deep flower.—E. MOLYNEUX.

New Japanese Varieties.

Mr. J. Martin has pointed petals, semi-reflexed, in colour it is rose, lined with terra-cotta, with a golden reverse. Miss Olive Miller, although not absolutely new, is not so well known as its merits deserve. The medium sized flat florets droop gracefully, building up a full solid bloom. The colour is quite pleasing—rose pink.

George Lawrence has long narrow drooping florets. In colour it is orange, suffused and lined with bright terra-cotta, golden reverse.

Mrs. F. W. Vallis is quite one of the finest of new introductions. The florets are extra long, droop gracefully, and form a massive flower fully 8in deep. The colour is decided crimson, suffused with apricot yellow, with a golden bronze reverse.

Florence Penford belongs to the incurving type of Japanese. The medium sized florets incurve closely. In colour it is amber, with light bronze stripes and a rose suffusion.

Rose Portevine has short broad petals of a charming soft rose colour. Souvenir de Père Calvat is pleasing in colour—soft pink, with rose and cream suffusion.

Countess of Arran has strap shaped florets building up a flower fully 9in in diameter. The colour is attractive—soft purple, deepening at the edge.

Countess of Harrowby. The florets are long, semi-drooping, with twisted points. The colour is effective—white, with a soft rose suffusion and defined edging of same.

Phillipe du Cros is of medium size, a capital decorative variety. The narrow florets are chestnut red on the surface, with a flush of yellow. The reverse is gold.

Lady Mary Couzens reminds one of Mrs. Barkley in style of flower; the florets are not so wide as in that variety. The colour is quite distinct—rose, mottled white.

W. Preece is rich yellow in colour, with closely incurving florets. Fairy Wreath was raised by Mr. C. Shea, and is most pleasing in its colour—soft cream, with stripes and flushes of rose. The semi-drooping florets are broad and flat.

F. J. Taggart belongs to the hirsute or hairy section of Japanese. The rich yellow colour is very attractive.

Mrs. C. M. Paige belongs to the incurving section of Japanese, and is an improvement upon Mons. Debric—warm pink in colour.

Dora Stevens favours M. Chenon de Léché in formation. The florets, however, are a trifle narrower. In colour it is rose terra-cotta, with bold reverse. A full promising variety.

Dora Payne is a sport from Miss Lucy Evans, and a promising variety too. The flowers are deeply built, with medium sized florets. The colour is distinct and pleasing—rosy cerise.

Lady Cranston. This is indeed a decided acquisition to an already long list of varieties. It is a sport from Mrs. Barkley; the florets are fully 6in long, some 1in wide; they droop in a graceful manner forming a grand bloom. The colour is pleasing—faint rose in the centre, gradually fading to white at the tips.—E. MOLYNEUX.

The Colchicums or Meadow Saffrons.

Just as hardy Cyclamens are greatly overlooked by many who have charge of outdoor grounds, so, too, are the autumn and winter-flowering Meadow Saffrons—the so-called "Autumn Crocuses." Mr. Arnott points out how large quantities of corms can be cheaply procured from home-sown seeds, in the following paragraph, and possibly this may induce an attempt in this direction—and the work, we can guarantee, is interesting. The best planting season for mature corms is August, and the species we figure (*C. autumnale* and *C. variegatum*) are two of the best known and handsomest.

Although the raising of Colchicums from seeds is a somewhat tedious process, seeing that one has to wait three or four years before flowering corms are produced, it is a cheap way of securing a stock of the more expensive species; while, at the same time there is always the chance of obtaining a valuable break from the normal species. The seeds, if saved from one's own plants, should be sown as soon as ripe, though they may also be kept until spring if necessary, although practically a year will be lost by this, unless they are sown early in heat, which I do not advise. The seed pods should be gathered when about ready to open, as if allowed to open naturally, some of the seeds will inevitably be lost. The sowings may either be made thinly in a bed of soil under a frame or handlight; in pots or pans in a cold frame; or simply in the open ground. In the last case the seeds may be about half an inch under the surface, but if in shelter a little less will suffice. The leaves should appear the spring after sowing, and, beyond giving plenty of air after the seedlings appear, and water, if under glass, no other attention will be required.

When the leaves ripen, an inch of soil may be added. The next season the same process may be adopted, but if in pots or pans the corms should be transferred to the open ground as soon as the leaves die down. I prefer to sow in the soil—not in pots or pans—and to allow the corms to reach a flowering size before disturbance. Thin sowing is necessary for this. As a rule the seedlings should never be dried off, and a golden rule with the Colchicums is to disturb them as seldom as possible.

Unless a large number of corms are required it is not worth while to raise the common *C. autumnale* from seeds, but the finer species will repay the trouble.—S. ARNOTT.

WINTER-FLOWERING COLCHICUMS.—"The Garden" of last week had the following notes by W. Irving:—"Although the majority of the more familiar Meadow Saffrons flower in the autumn, there are a few exceptions, and from the countries of the East we get some species which do not bloom until winter or early spring. Belonging to this section are the following three species, which at the present time are in flower. *C. libanoticum* is found near the summit of the mountains of Lebanon in Syria. Resembling *C. montanum* in general appearance, it differs in having broader and shorter leaves and yellow stamens, and also in its winter-flowering character, *C. montanum* not flowering till the spring. The two species differ also in the number of flowers produced from each corm, the latter having two to three with the same number of leaves, while *C. libanoticum* has four to five rather larger flowers, with broader segments and a corresponding number of leaves. The flowers range in colour from white to pale rose. Corms of this species were obtained from Palestine in 1900, flowering the same winter. *C. luteum* comes from the mountains of the extreme west of India, where it is found at an elevation of 7,000ft in Kashmir and Afghanistan. This rare little plant is unique in being the only yellow-flowered species in cultivation. The size of the large corms is out of all proportion to that part of the plant produced above ground. About 3in to 4in high, with a slender tube and ovate perianth segments, the flowers are usually solitary, attended by two linear strap-shaped leaves. Introduced in 1874. Under the name of *C. Sieheanum* corms were received this year from Mr. W. Siehe, of Mersina. It is a pretty little plant in the way of the Hungarian *C. arenarium*, which it resembles in stature and in the colour of its flowers. *C. arenarium* is, however, an autumn-flowering plant, the leaves not appearing till spring. The present species produces flowers and leaves at the same time; it began to flower this year at the end of November. The flowers are of a rich reddish purple."



A Colony of Meadow Saffrons



National Economics.

In sending my contribution on National Economics, I deprecated alterations. You have confused the issues in relation to the 1,000 and 30,000 acres. No young fruit trees should ever be planted in place of old ones, nothing short of fresh acreages converted from arable or grass will suffice. Your editorial interjection as to Nature Study being taught liberally in Germany is not to the point. I do not aim at conventionalism merely, but let the young begin to learn to know their environment from a couple of years before that other strait-waistcoat—the three R's—are applied. These would be assimilated as in play after the preparation of their minds. In these lines I prophesy, Huxley's lines are my lines.—H. H. RASCHEN.

County Council Instructors in Horticulture.

I see by last week's *Journal* that the list of the counties in Ireland that have instructors is not complete, as Kildare and one or two other counties have them. The Kildare Agricultural Committee was the first in Ireland to appoint an instructor (December, 1901). Last year there were five demonstration gardens in different parts of county Kildare, to show the best methods of vegetable and fruit growing, and these worked so well that all the counties having instructors have such plots this year. Again, last year the Kildare committee bought fruit and other trees in large quantities, to dispose of to persons in the county at cost price. This, again, has been taken up by other counties this year. The county instructors show the people the proper methods of planting and pruning, and suggest the best varieties of fruits to grow. During the winter (from October to March) lectures are held on five evenings each week, in national schools and other places, on fruit and vegetable growing, the attendance averaging about 100 at each meeting. Prizes are offered to the value of £126 for the best kept cottages and gardens in the county in 1904 by the Committee of Agriculture. Prizes have also been given for the past two years. There are also in the county three cottage garden societies holding shows about the month of July each year, for vegetables, fruits, flowers, poultry, butter, eggs, and cottage industries, in Naas, Athy and Celbridge.—Hortus., Co. Kildare.

Making a Garden.

There is much that is interesting in Mr. W. Rowles's remarks on "Making a Garden" in your recent issues, but, as one of the young men, I am disposed to think that too much importance should not be given to garden plans. True, when a garden is already made, a considerable amount of interest can be obtained from drawing a plan of it, but the custom of drawing designs of proposed gardens are, to my mind, not wholly satisfactory. There are many who make a living at garden design drawing, chiefly ladies, and some of their works are utterly ridiculous, although looking pretty on paper. Moreover, many experts admit that it is folly to depend entirely on designs when making a garden, as many things are bound to crop up which the designer cannot have foreseen. To my mind, a man who has no artistic taste cannot hope to make a really pretty garden, plan or no plan, whilst to insist that all persons can draw one is quite fallacious. Draughtsmanship is inborn; teaching and practice only improve, and bring out the latent instinct. Were it not so we might all be a Seymour Lucas, or some other great artist.

Being now employed, together with an expert, in reconstructing a crude and badly designed garden of some age, I may say that not a single item has been put upon paper. Our system is simply to take a general aspect of each point, and conjure up a vision of what the effect would be were certain trees taken away or a hedge demolished, and a snubbery, borders, or banks, &c., put in their places. Having got the idea, we tackle the work personally, for we are our own workmen, and as each item is completed another idea crops up. Under this system a portion of a large lawn has been seized and converted into a shrubbery; a forest of Birch, Elders and Laurels, under a huge Poplar, has become a little wild garden, enclosed by rustic fences. A piece of sloping ground has become a sunken bed, the earth taken out being used for making up high banks fronted by stones. A dirty, weed-grown puddle, hedged in by rubbishy, neglected trees, is already becoming an ornamental pond with slightly sloping banks, which will be filled with plants that will flourish under the huge trees overhanging them. By our united efforts

it will take three or four years to complete the whole alterations thought of, but paper gardening is not resorted to until each section is complete, and then each border, &c., is sketched out and the various plants marked off in detail, so that should a label get astray we know exactly where to look for the name.—CUPID.

[We should be exceedingly sorry if Mr. Rowles's admirable instructions and advice were to be left unheeded, on the grounds that alterations can be successfully completed without the aid of drawn plans. The case cited by "Cupid" may work conveniently well where the operations are not undertaken by contract, but on large estates it is imperatively necessary to lay the plan primarily upon paper, to a scale, as with estimates.—Ed.]

Red Spider.

Like your correspondent, on page 535, I, too, have something to add respecting the behaviour of XL All as a Vine fumigator. This autumn, spider insinuated itself in our late vinery. As the fruit was all but ripe, the application of water in any form was not advisable. Thinking that, on account of the advanced state of the foliage, any danger would be trifling, I essayed to try a dose of XL All. The vinery was planted with Muscats, Colmans, and Alicantes. To be on the safe side, I only applied a little more than half quantity, on the assumption that if it did not cure, it would do no harm. I was fully aware of the sensitive nature of Muscat foliage to the fumes of nicotine, but buoyed up by the belief that the coriaceous texture which it now possessed would make it immune, I was perfectly fearless of damage. That the fumes would attack the stout foliage of the Gros Colmans never entered into my calculations at all.

Two days afterwards, imagine my horror to find the leaves of the Colmans beginning to curl up round the margins. Next day the Muscats began to give unmistakable evidence also of disaster, and in about ten or twelve days, one would think that vinery was scorched with the sun or poisoned by sulphurous gas. I lost at least a fourth part of the foliage, and were it not that the Vines were in a vigorous condition, and that I allowed every particle of lateral growth to remain attached, I would not chance very much on the value of next year's crop.

The same means saved the growing crop, and with the exception of a little bad colouring in the Colmans, which, perhaps, was due to a wet season as much as to the little disaster, there was not much to complain of, after all. Still there was a decided disturbance of the natural health of the plants, and though not very apparent, may, however, show itself in some form next year. However, I am sincerely thankful that it was not worse, as it might have been. In its proper sphere XL All is a very valuable gardener's friend, however. The spiders in the above instance did not appear to have been the least inconvenienced.—Horti.

P.S.—XL All must be used with caution in the early Peach house.

The Uncut R.H.S. "Journal."

Kindly allow still another "Scottish Fellow" to add his grumble anent the uncut edges of the splendid "Journal" of the R.H.S. With every word in favour of the cut edges said by your other correspondents I emphatically concur, even at the risk of being considered "a barbarian." There are many of us who have little spare time, and who take no delight in cutting the pages of a book, thus taking up the time which would be better devoted to reading the valuable fare provided within. I hope the powers that be, will take into consideration the suggestion made, and that they will supply those who wish the "Journal" with its pages cut with copies in that form. The concession would be a boon to many, and among them to—ANOTHER SCOTTISH FELLOW.

I cannot resist supporting the plea of "Chelsonian," page 510, regarding the uncut pages of the "R.H.S. Journal." The contents are for the greater part most valuable, and are intended for the perusal and edification of the Fellows of the Society. There are many, I am aware, who would welcome its arrival with infinitely more pleasure if they could open its pages at once and dive into it: but are obliged, through lack of time, to delay it on account of the pages being uncut. The "Journal" is then often cast on one side until a convenient time, which very often means weeks, or not at all. One can scarcely see that it would add but little to the expense if it was done before it left the printer's hands. It would be a boon to many besides—A SOUTHERN FELLOW.

I am glad to see the references to the trouble of having to cut the multitudinous pages of the "Journal of the Royal Horticultural Society." To a busy reviewer this is a perfect nuisance, and I have no doubt that it prevents many notices of articles that would be given if the publication could be glanced through without spending a valuable half-hour in cutting it. For my own part, I cut the Journal only where some heading attracts me, and probably the great majority of the readers do the same.

To send out such a periodical uncut is to be much behind the times. I receive a good many similar publications from the several agricultural societies, but the "Journal of the R.H.S." is the only one not machine cut.—R.

Gardeners and Situations.

It is distressing to learn that when it is made widely known by advertisement or otherwise that a situation of any value to be filled by a gardener is vacant, the applications for it are counted by scores, and sometimes by hundreds. That fact shows that, like many other vocations, gardening has its labour troubles, and finds the supply to so greatly exceed the demand. We do not hear of any suggestion that garden places are becoming gradually fewer. That some old places have been gradually broken up, and are now attractive suburbs or building sites there can be no doubt; but even in such cases myriads of small garden situations have been created that were readily filled. They are not high class places, such as need a first-class head, but they furnish occupation for very many men whose gardening knowledge if limited, at least suffices to enable them to work these small places very nicely, and in a way that gives general satisfaction. But it is in relation to the more pretentious gardens—the prizes of the profession—that the excess of supply is so gravely felt. It has been said that this dearth of situations is partly due to the fact that those in possession stick to them. That is a good reason, seeing that if those in possession left places more frequently they would still be items in the number which make up the great body out of work, or, at least, out-of-place gardeners. Gardeners in possession of places, if they be worth anything, do hold on to them; but this is more because that the holders realise the difficulty which besets the vocation in getting other places. They are, therefore, wise to make the best of even a bad position, if getting out of it may but lead to worse things. That there are places which, to good gardeners, are veritable purgatories, is but too certain. Where they are often being vacated it needs but little knowledge to understand their character. These are places good men should endeavour to avoid.

One of the changes now proceeding by which gardening is materially affected is found in the displacement of the old English gentry and nobility, whose ancestors have been patrons of gardening, and have always treated gardeners with high consideration, by a new race of owners or occupants, men whose wealth has been made in commerce, in mines, in all kinds of trading enterprises, and who now deem to settle down and play the part of English country gentlemen. Many of these have brought wealth into the old gardens they have become the occupants or possessors of. When to this has been allied good gardening tastes (and happily it is often so), their money has been spent freely; new gardens are made, new glass houses and other buildings erected, sometimes, indeed, of a truly palatial nature. It is in such cases as these gardening has had an impetus given to it which was badly needed. If many of our old families have grown rich, many more have become too poor to continue to occupy their old ancestral mansions and gardens; and the wealthy traders in taking their places have spent liberally, where the others had severely to retrench.

Probably it will be found that the incursion of the wealthy commercial element into country life, and especially garden life, has been good for horticulture. There can be no doubt that whether the places be good or bad very many have been found for first-class gardeners that otherwise must have been vacant, or become the charges of head labourers only. But even if there be an increase in the number of gardeners' situations or not (and that is so far as relates to good places very problematical), at least it is certain that there is no cessation in the manufacture of gardeners. Year after year young men go into gardening in so many diverse ways: in nurseries, in market-growing establishments, in botanic gardens, and colleges, and even the vocation is being very determinedly invaded by women, who exhibit a degree of energy, perseverance, and earnestness in their efforts to learn, that may well give pause to the young men, their competitors.

But the great manufactories of gardeners are, after all, the private gardens of the kingdom. In each of these, with a head who has held tenure perhaps some twenty or thirty years, there is passing through the gardens, as being trained, perhaps in the period stated some fifty to sixty youths, all of whom look forward to the day when they too shall become heads. Such hopes never can be fully realised, unless those who hold them are content to take, later on, single-handed situations, or where just one or two labourers are kent. There is just now in the kingdom, no doubt, for every head gardener five or six young gardeners, and heads go on increasing the numbers in the vocation without any consideration as to the future prospects of those they thus profess to introduce into the great fraternity of gardeners. When to this abounding superfluity is added the fact that at the present moment too, there are hundreds of first-class gardeners seeking vainly for situations, the grave position of the gardener is accentuated. We have a great need for a reduction of the exist-

ing supply of gardeners, especially of young ones, and head gardeners should, in justice to the youths they engage and train, seek to reduce the redundancy, keeping the best and sending the worst into other vocations. The matter demands grave thought and consideration, to be followed by remedial action.—SURREY.

Commercial Travellers.

"A. N. Noyed's" remarks were presumably made for the sole purpose of opening a controversy—he never could have expected anything but a dressing down! He must have an extremely easy situation to be able to spend his valuable time in adopting a stratagem to defeat the ends and aims of "Mr. Nuisance." Surely it should have been an absurdly easy task to do better than "work dodges" with one so utterly devoid of tact and courtesy as was poor "Mr. Nuisance." I cannot but think that such a representative, however, exists only in "A. N. Noyed's" imagination. Certainly no firm of ordinary prescience would place such a man on the road in the first place!

If it did, however, in some error of judgment common to all, he would be quickly taken off again, for it is obvious that tact on the part of a traveller is the first essential factor to that gentleman's ultimate success, and therefore the sooner he is kept at home the more work is likely to be got through diurnally by such gardeners as "A. N. Noyed," as the temptation to play human draughts would be removed, for there would be no one to play the counter move.

I venture to think that commercial travellers generally are able to pay more respect to the personality of gardeners as a whole than "A. N. Noyed" is disposed to grant to a solitary individual, who (for the sake of argument we will say) presumes on the title of "Commercial Traveller." Primarily, courtesy; secondly, the courage to say "No" to a canvasser for orders, are the two graces that single out the professional gardener as a rule from such examples as "A. N. Noyed." May gardeners who are gentlemen, and travellers who can treat them as such, continually flourish!—CRATE EGG.

Chrysanthemum Critique Controverted.

In the interest of some of your less experienced readers, I beg leave to point out that your correspondent, "Sadoc" (page 532), is mistaken in describing Mrs. T. W. Pockett as a sport from Nellie Pockett. I must also contradict some other of his assertions. Lily Mountford has not lost its rose colour; and if J. R. Upton has lost its rich yellow, what colour is it now? Mrs. Barkley is not a failure; neither is Florence Molyneux when properly grown. W. R. Church has been shown in splendid form this season, so that any lack of development must be purely a matter of culture. Mrs. J. Lewis, M. Louis Remy, and Le Grand Dragon have all been shown in good form this year; and, given a better season, there is no reason why they may not be as good as ever. If Mildred Ware is "medium sized," and Godfrey's Pride "too small," where are we getting to? And if Madame R. Cadbury is "a thing of the past," it is not a very far distant past, as may be seen by the accounts of recent shows. T. Carrington and Australie are still among the largest, and the "Heroine from the Isle of Man" is quite out of the hairy section, though it might take the place of Duchess of Sutherland as a Japanese incurved.—R. BARNES, Wych Road, Malvern.

I must take up the cudgels on behalf of some of the so-called unsuccessful varieties mentioned by "Sadoc" on page 532. First of all he says W. R. Church has not been consistent this season. Perhaps not, but it was mentioned twenty-one times in reports in the "J. of H." of 19th ult., and thirteen times in the issue of November 12. I always understood that the green tinge on the tips of the petals constituted one of the chief charms of this variety. In the analysis of last year it headed the list with M. L. Remy, another of the unsuccessful ones, and Mrs. G. Mileham. Then came F. Molyneux, Mrs. Barkley, Australie, Madame Carnot, and Mrs. W. Mease, all unsuccessful ones.

I have seen M. Chenon de Léché shown well this season, and see it won the award for premier bloom at West Hartlepool and received twenty-three out of twenty-seven votes at the last audit. J. R. Upton I find mentioned seven times in reports of 19th ult., and Guy Hamilton and L. Mountford have each won certificates for premier bloom.

Mrs. J. Lewis is far from played out yet, and given proper treatment is still one of the very best whites, and was marvelously well shown at Cardiff, and I venture to prophesy that when the result of the poll is declared many of "Sadoc's" so-called failures and varieties of the past will be in the first fifty, and some of them nearer the top than the bottom.

I cannot find Mrs. Clayton catalogued, but J. E. Clayton is a sport from Eva Knowles, and Mrs. T. W. Pockett is not a sport from Nellie Pockett, neither can it by any stretch of imagination be classed an "incurved Japanese."—A. H.

* * Numbers of letters have unavoidably had to be held over.—ED.



Profitable Varieties of Bush Apples.

(Concluded from page 540.)

A good intermediate variety, in season from October to December, is Warner's King. It was known in the eighteenth century as King Apple, but was discovered, as it were, and brought into public notice by the late Mr. Rivers, of Sawbridge-worth, who got it from a Leeds nurseryman named Warner, and called it after him. It is a strong, erect grower, and should be given more space than most of the others mentioned. It is a very large Apple—"Fine for Apple dumplings," as someone said who saw it at a show—and is produced very freely. I have seen a specimen weighing 1½ lb. A friend of mine had a good crop last autumn on a standard tree, where Apples do not generally grow as large as on bushes, and five Apples together weighed 4½ lbs. It is at its best in October and November.

Everyone reading this series will miss some Apples that are put in every collection. Those I have mentioned, as stated before, possess four characteristics—they are hardy, healthy growers, good bearers, and of very good quality. They will thrive on almost any soil that is fit to grow fruit at all. Some favourite Apples have been omitted because they canker on wet soils, or are not sufficiently prolific at an early stage, or because I consider them overrated.

If one has a fairly warm soil—that is, fairly light and open and well drained, and not inclined to run together—there are several others which not only should not be omitted, but should be grown in preference to many of the preceding. The first, of course, is

Cox's ORANGE PIPPIN.

too well known to need description. It is universally acknowledged to be the best dessert Apple. It makes a very prolific bush, but is rather subject to woolly aphis and other forms of "blight" unless the soil is very suitable. This Apple is being planted in enormous quantities, and people ask if it will not become as cheap as other Apples when these trees come into full bearing. There seems no likelihood of this, as I am told we export large quantities of our best samples to the United States, as they cannot grow it there of such fine flavour as we can here. This Apple is another example of an Apple suddenly coming into notoriety, as it was raised as long ago as 1830 by a Mr. Cox, a retired brewer, of Slough, and only during the last ten or twenty years has it become really well known, even amongst gardeners.

KING OF THE PIPPINS.

This is another almost equally famous Apple, though not nearly so good, universally known as King of the Pippins. It needs a warm soil in a favourable district to be really first-rate, but in the opinion of most connoisseurs it is overrated at its best, though certainly a very good Apple. It is prolific, beginning to bear at an early age. Dr. Hogg says that the true King of the Pippins is ripe in August and September, and that the Golden Winter Pearmain is perfectly hardy and will grow in almost any situation. There appear to be at least two varieties of this Apple, one being spreading in growth and not very highly coloured, and another upright in growth and very highly coloured. Certainly Dr. Hogg's remark is not true of the latter, which in some places is scarcely worth eating.

MANNINGTON'S PEARMAN.

A dessert Apple of much better quality than the preceding, though we do not hear nearly so much about it, is the delicious Mannington's Pearmain. A well-drained soil and a fairly favourable position otherwise, are absolutely necessary for this Apple. It is worth any extra trouble if by that means it can be got to do well. It is strange that such an excellent Apple should have originated in a hedge where the refuse from a cider press used to be thrown. It is at its best in January and February, though it will keep till April. The flavour is remarkably sweet, and rich, and to have it in perfection it should be allowed to hang on the tree as late as possible. Hence the advantage of the bush form for this and other late Apples. The tree is dwarf, and the growth slender and spreading. It is one of the most prolific varieties in good situations, young trees two or three years from the graft, bearing well.

WELLINGTON.

The last Apple to be mentioned is Wellington, alias Dumelow's Seedling, alias Normanton Wonder. It was raised by a Mr. Dumeller in a Leicestershire village, and introduced between 1815 and 1820, when the Iron Duke was at the height of his

fame. It is a medium sized Apple, from a bush, sometimes large. It is in season from October to April, in which latter month it is not bad eating, though always acid. In a tart it is a perfect sweetmeat. It is said to be the cook's favourite. In a cold, wet soil there is no Apple more liable to canker, and it is said to be more liable on the Paradise than on the Crab. It is very prolific.

Even now there are omissions which will surprise most people. It is amazing what differences there are in the lists of what the authors consider the best Apples. Some time ago Messrs. Pearson, of Lowdham, Notts, conducted an Apple election, consulting thirty-two Apple-growing experts all over the country, one of the points to be decided being the best six dessert Apples for bushes, combining quality with free bearing. Twenty included Worcester Pearmain amongst their lists of six. Further than this, Thompson's "Gardener's Assistant" mentions this Apple as one of three to grow, if only three can be grown, doubtless in order to have an autumn Apple. On the other hand, Dr. Hogg, usually very optimistic, merely says it is "A handsome early kitchen or dessert Apple, and, from its great beauty, a favourite"; while one nurseryman's catalogue simply puts it in the list of select kitchen Apples. Thus it is impossible to make a list which shall satisfy everyone. I have kept to the conditions mentioned at the beginning of this review, and do not pretend that if judged for quality alone, I should have mentioned all of the above-named. But some of those of the finest quality sometimes have to give place when we demand in addition hardiness, fertility, and healthiness and freedom of growth. A. PETTS, Essex.

Young Pine Stock.

Spare no effort to keep growing plants from becoming drawn and weakly, by giving all the light possible, and not pinching them for room. Maintain a temperature at night of 55deg to 60deg, which, with 65deg in the daytime, will keep the young stock gently growing, admitting a little air at the top of the house at 65deg, leaving it on all day, but do not let the temperature fall below that point, and where the temperature advances to 75deg from sun heat a free circulation of air must be allowed. The bottom heat should be kept steady at 80deg. Avoid a damp atmosphere; an occasional damping of the paths will suffice. Water only when the plants become dry, then afford a proper supply of weak liquid manure.

Where a supply is required in May and June, and the plants are not showing fruit, it will be desirable to select from those started last March, which have completed growth and are now in a state of rest, such as show a stout base—the best indication of starting into fruit when subjected to a higher temperature both at the roots and in the atmosphere. The plants are best placed in a structure to themselves. Where this cannot be afforded they must have a light position in the house where the fruiterers are swelling. Maintain a night temperature of 65deg in the fruiting department, 5deg less in the morning of cold nights, and 70deg to 75deg by day, but in very severe weather a few degrees lower is preferable to extra sharp firing.—PRACTICE.

Early Muscat Grapes.

Where Muscat of Alexandria Grapes are required ripe at the end of May or early in June the house must now be started. The Vines must have the roots wholly inside, and the soil be brought into a fairly moist, but not wet condition. The temperature should range from 55deg to 60deg at night, 65deg to 70deg by day, the lower heat representing the severe, and the higher the mild weather rate. These temperatures should be maintained until the buds break, when the heat will need to be gradually raised so as to have it 65deg to 70deg at night by the time the Vines come into leaf, 70deg to 75deg by day in dull weather, and 10deg to 15deg rise from sun heat; the house, therefore, must be well heated, and means provided for admitting air without causing cold currents. With these contrivances and good management success is assured, Muscat of Alexandria Grapes always commanding top prices, especially early in the season, but unless they are well done the Grapes are not satisfactory additions, considering that the expense is much greater, taking the cropping as compared with Black Hamburgh into consideration. Madresfield Court is an excellent companion in black to Muscat of Alexandria, and forces splendidly.—VITIS.

Pear, Beurré Bosc.

This week we figure a fruiting branchlet of this Pear, the fruits, of course, much reduced from the actual size. The "Fruit Manual" says, "This, which is generally supposed to have been a seedling of Van Mons, was found a wildling at Apremont, in the Haute Soane, and was dedicated to M. Bosc, the eminent director of the Jardin des Plantes at Paris." The French word, "beurré," signifies in English, "buttery." From some of the nurserymen's catalogues we extract remarks as follows:—

Beurré Bosc.—Large, prolific, requires warm situation. Medium. Richard Smith and Co.

Large, requires a warm soil and situation, a great bearer, does

well on chalky soil near the seaside. October and November. Cannell.

Large, a delicious half-melting Pear. Requires a warm soil and situation, otherwise it will not ripen. Not to be confounded with the Calebasse Bosc, which is a good market-garden Pear of second-rate quality. (D. G.) Rivers.

A large, shapely, yellow Pear, covered with cinnamon russet, in warm soils buttery and richly flavoured, in cool soils crisp and juicy; a heavy cropper and healthy grower. Clibraus.

Large, rich, and delicious; the tree is a great bearer, and generally succeeds best against a wall either trained as a dwarf or cordon; it forms a medium sized pyramid. October and November. J. Veitch and Sons.

Large, requires a wall or warm situation. Hundreds of bushels are marketed from orchards in East Kent, but unless the soil is warm and deep, it is not suitable for standards. A long russety fruit, which succeeds on chalk by the sea. Rich distinct flavour. (D. G.) Bunyard.

Societies.

Annual Meeting of the N.R.S.

A very large representation of rosarians from all parts of the country attended the annual general meeting of the National Rose Society at the Hotel Windsor, Westminster, on the afternoon of Thursday, the 15th inst. Mr. C. E. Shea presided, and there were present the following, whose names are given as they occurred in the signature book:—Messrs. Alfred Tate, B. E. Cant, C. Haywood, F. Page-Roberts, Alex. Dickson, H. V. Machin, R. Harkness, G. Burch, G. Moules, H. P. Landon, Geo. Bunyard, Geo. Paul, Cecil E. Cant, W. D. Prior, Lewis S. Pawle, W. H. Cooling, Capel Gifford, R. Basewell, Ed. Holland, Clifford Chadwick, F. Cliff, R. W. Bowyer, Dr. Shackleton, J. T. Strange, J. Stevens, Conway Jones, W. J. Jefferies, A. Foster-Melliar, G. Gordon, R. Powley, W. Boyes, J. Pemberton, O. G. Orpen, E. Mawley, Courtenay Page, H. E. Molyneux, A. R. Goodwin, G. Spight, T. Rigg, H. G. Mount, H. J. Spooner, J. Mattock, H. S. Bartleet, J. E. Rayer, F. Cant, A. Christy, G. W. Cook, E. Smith, E. T. Cook, J. Bateman, G. W. Piper, G. Caselton, J. Dennison, Dr. Masters, T. N. Flintoff, A. T. Pipon, A. Prince, T. B. Gabriel, W. Gallon, Mahlon Whittle, V. B. Johnstone, C. C. Williamson, and W. H. Birch.

After the preliminary business, the hon. secretary read the report, and the hon. treasurer the financial statement, as under:

REPORT OF THE COMMITTEE FOR THE YEAR 1903.

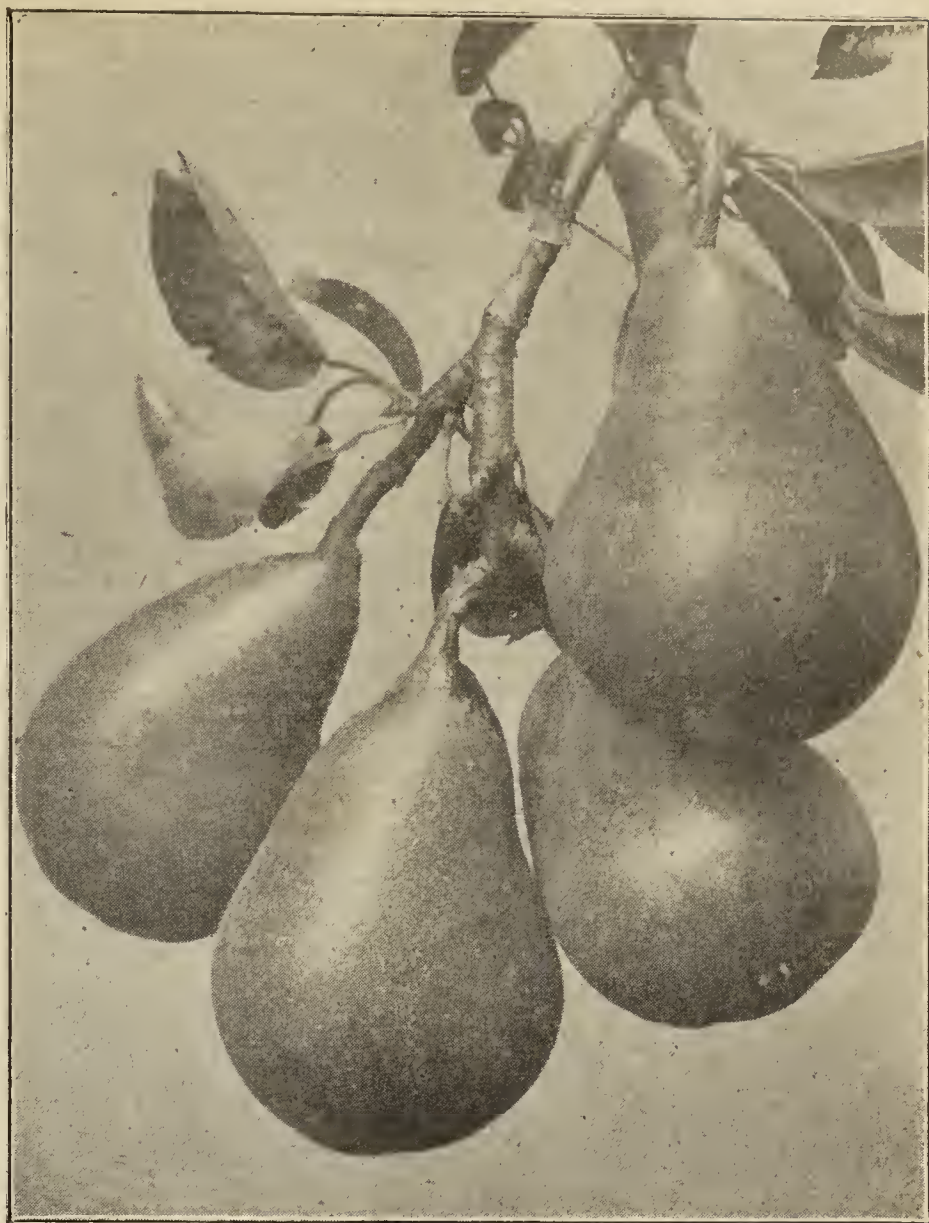
The report for the past year, which the committee have now the pleasure of presenting, must be regarded as, on the whole, a most encouraging one.

"The Rose season of 1903, like that of the previous year, proved extremely backward, and, as the date of the Metropolitan Show, July 1, was again unusually early, it appeared likely, only a week before the exhibition, that there would be few Roses out in any part of the country in time for it. Fortunately, with a change to warmer weather, the prospects became more favourable, and the tents were, after all, fairly well filled. As, however, might have been expected under such unfavourable conditions, the general quality of the flowers and the number exhibited fell short of what one naturally expects to see at this, the leading Rose show of the year. The number of exhibition Roses staged was even smaller than last year—indeed, smaller than any year since 1893, or for ten years.

"The committee gratefully acknowledge their indebtedness to the Treasurer and Benchers of the Inner Temple for again allowing the show to be held in their garden. They also tender their best thanks to the President and Council of the Royal Horticultural Society for so considerably placing their staff of assistants at the society's disposal on the show day. Both of these concessions are warmly appreciated by all in any way responsible for the success of the society's Metropolitan exhibition.

"As to the future prospects of that show, the committee feel convinced that when once this grand display of Roses comes to be regarded as an established annual institution, it will be much more largely patronised by the general public than at present. In a huge city like London three years is scarcely sufficient time to allow of an exhibition of this kind, held on only one day of the year, to become generally known. The committee have pleasure in recording that at the Temple Rose Show this year there was a gratifying increase in the number of classes for Roses staged in other ways than in the regulation boxes; indeed, only half the classes in the schedule were devoted to Roses staged in the latter way, whereas only five years ago the box classes claimed four-fifths of the schedule.

"The northern show, which took place at Glasgow on July 15, proved in all respects a magnificent one, and the resources of St. Andrew's Hall were taxed to the uttermost to provide room for the exhibits; 3,970 blooms of exhibition Roses were in all



Pear, Beurré Bosc. (Reduced).

staged, which is, with three exceptions, a greater number than at any previous northern exhibition held by the society. Every credit is due to the committee of the West of Scotland Rosarians' Society, and particularly to their new secretary, Mr. John Lindsay, for the arrangements made on that occasion. These were rendered unusually difficult owing to the extent of the show, and to its being held away from Helensburgh, the home of the society.

"Early in the year a subscription was set on foot in order to raise a fund in memory of that keen rosarian and generous friend of the society, the late Mr. Charles J. Grahame. Through the kind exertions of the Rev. G. E. Jeans and Captain Ramsay, secretary and treasurer of the fund, the sum of £52 11s. 6d. was collected. The first Grahame Memorial Prize was competed for at the society's Temple Show in July last. It is with much regret that the committee record the death during the past year of Mr. J. D. Pawle, a vice-president of the society and one of its earliest and warmest supporters.

"FINANCE.

"Considering that the takings at the Temple Rose Show were only about the same as in 1902, and that £62 had to be paid for the printing of the new edition of the official catalogue, which was issued to members last year, the present state of the society's finances must be regarded as highly satisfactory. The total receipts, including a balance of £14 19s. 3d. from the preceding year, amounted to £1,179 7s. 11d., and the expenditure to £1,126 0s. 11d., leaving a balance of £53 7s. in the treasurer's hands. Consequently there has been this year no occasion to make any call upon the guarantee fund. With a view to obtain the nucleus of a reserve fund, no provincial exhibition will be held by the society in 1904. Previous to 1901 there was no necessity for a reserve fund, but since the society began to hold an independent show in the Temple Garden the need of such a fund has been keenly felt. In the opinion of the committee this will be a much more satisfactory plan than relying from year to year on an annual guarantee fund. In the latter case any deficiency that may arise has to be made good by the guarantors alone, whereas with a reserve fund this would be defrayed, as it should be, out of the general funds of the society. There has again been during the year a very gratifying increase in the number of members. In 1900, the year before the Metropolitan Show was first held in the Temple Garden,

the number of members was only £84, whereas now there are over a thousand members on the society's books, showing a total increase in the three years of 72 per cent.

"ARRANGEMENTS FOR 1904.

"The Metropolitan Show will again take place, by the kind permission of the Benchers of the Inner Temple, in the Temple Garden, on Wednesday, July 6. There will be no provincial exhibition next year, but an autumn Rose show will be held in conjunction with the Royal Horticultural Society in the new Horticultural Hall of that society, on Tuesday, September 20. This is a new departure, and, should the season prove favourable, a most interesting and attractive exhibition of autumn-flowering Roses may be anticipated.

"MEMBERS' PRIVILEGES.

"Members subscribing one guinea will be entitled to six five-shilling tickets, and subscribers of half a guinea to three five-shilling tickets of admission to the society's exhibition in the Temple Garden. In addition to this, each member will receive an admission ticket for the society's autumn Rose show to be held in the new Horticultural Hall of the Royal Horticultural Society in Westminster. Members joining the society for the first time in 1904 will also receive copies of the following publications:—The new edition of the 'Official Catalogue of Exhibition and Garden Roses,' the new and revised edition of the 'Hints on Planting Roses,' the 'Report of the Conferences on Pruning and Exhibiting Roses,' the 'Report on the Constitution of Rose Soils,' the 'Conference Report on the Decorative Use of Some Garden Roses,' and to a symposium on 'How to Grow and Show Tea Roses.' All members will receive, during the course of the coming year, a new treatise on pruning Roses, which will be prepared by a special committee of experts appointed for that purpose. Members alone are allowed to compete at the shows of the society. Members will be entitled to purchase tickets for their friends for the Temple Rose Show at reduced prices.

"The committee convey their best thanks to the donors of special prizes, the keen competition for which adds so much to the attractiveness of the society's Metropolitan exhibition, and especially to Captain Ramsay for the handsome cup he has now given for six consecutive years as the leading prize in one of the most popular classes in the show. The local secretaries have again done good service, the most successful being Mr. C. Barber, Mr. H. S. Bartleet, Mr. H. E. Molyneux, Rev. R. Powley, and Mr. J. Wakeley. For the largest number of fresh subscribers obtained by any one member during the past year the committee gratefully acknowledge their indebtedness to Miss Willmott, a vice-patroness of the society; in fact, during the last three years Miss Willmott has succeeded in adding to the list no fewer than fifty new and influential subscribers."

BALANCE SHEET. YEAR ENDING NOVEMBER 30, 1903.

RECEIPTS.		£	s.	d.
1902.				
Dec. 1.	Balance at bankers	14	19	3
	Subscriptions	626	16	8
	Affiliation fees and medals from affiliated societies	64	10	6
	Advertisements	19	16	0
	From West of Scotland Rosarians' Society	80	0	0
	Special prizes	85	13	0
	Proceeds of Temple show	262	16	0
	Sale of publications	10	18	6
	Guarantee fund—balance of call not paid last year	8	10	0
	For proposed treatise on "Chemical Manures for Tea Roses," from A. Hill Gray	5	5	0
		£1,179	7	11

EXPENDITURE.		£	s.	d.
	Printing, stationery, and advertising	131	14	3
	Postage, telegrams, and sundry expenses	54	16	5
	Expenses Temple show	297	1	5
	Glasgow show	6	10	0
	Medals	22	19	10
	for affiliated societies	47	4	0
	Prizes Temple show	220	17	0
	Glasgow show	150	5	0
	Purchase of plate for prizes	59	13	0
	Assistant secretary and accountant	55	0	0
	Balance at bank	53	7	0
		£1,179	7	11

The foregoing report and balance-sheet having been briefly commented on by the chairman, were adopted unanimously. The thanks of the Society was given to the officers and committee for 1903, on formal proposition, and passed with acclamation. Bye-law 5 was then altered by unanimous consent as follows:—"That the first part read: Notice of any proposed alteration either of these bye-laws or of the regulations for exhibitions must be given in writing to the Secretary at least two weeks before a general meeting, and no bye-law nor regulation shall be altered except at a general meeting of the Society." This was simply to facilitate the business of the annual meeting, and also prevent any surprise being sprung upon it.

Next there was proposed an addition to Regulation 1: "That

Regulation 1 be altered so as to read:—That the Society shall hold one or more metropolitan shows in each year, and provincial shows when practicable. The date of the metropolitan show shall not be earlier than July 6."

This, of course, was proposed by the Rev. Jos. H. Pemberton, who has had to work hard and incessantly in order to get the alteration made. It was seconded by Mr. J. Jefferies, Cirencester, and after a prolonged discussion, in which Mr. Mawley moved an amendment, seconded by Mr. F. Cant, Mr. Pemberton won the day by about a dozen votes. Last year he only lost by one vote, and to make certain of victory on the present occasion he had urged as many supporters to his assistance as possible. The chief reasons for the proposals were circulated some months ago, and the bulk of them were printed in our pages at the time ("J. of H." September 10, page 249). The speakers in favour of the proposition were Rev. A. Foster-Melliar, M.A. (whose Roses, he said, were generally about their best on July 12), Geo. Gordon (who had prepared an analysis from the reports of N.R.S. shows for twenty years back, showing that the best exhibitions had all been on or about July 6 and 7), W. Boyes, Derby (who had never been able to show at N.R.S. exhibitions owing to the early date), Geo. Paul (who suggested that Roses bloom nowadays later than formerly owing to the use of the Briar stock instead of Manetti), also Alex. Dickson, J. Bateman, Highgate, N. (his Roses are at their best July 7 and 8), H. V. Machin, and a few other members from the Midlands.

On the opposing side there were O. G. Orpen, and a member from Croydon. Mr. H. Molyneux spoke, but did not take sides. One speaker remarked that the discussion seemed to divide itself into North v. South, to which there were repeated cries of "No! No!" A strong point with Mr. Pemberton was that as there would be no northern show this year, what was to become of northern members if an early date were decided upon? "The compulsory absence of the Northern and Midland growers, not only this year, but in several years past, seriously challenges our Society to the name of National."

While Mr. Pemberton fixed his dates between the 6th and the 12th, Mr. Mawley fixed his between the 3rd and the 9th. The latter said he was, however, truly in accord with the spirit of Mr. Pemberton's proposition, i.e., he wished the Society to be representatively National. July 6 would be right for a late, but not for an early, season. The two last seasons have been the latest on record during twenty-seven years, 1879 excepted. Mr. Frank Cant stood up for the "small" growers, men who have only a few hundred plants, who possess few maidens, and are therefore dependent on cut-backs, which are over, he said, by July 6. But as Mr. Foster-Melliar pointed out, the cut-backs must be cut still harder back, and they won't then be out of flower by the date named. The discussion was interesting in the main, and the matter may be regarded as settled for some time at least.

After the annual general meeting the friendly dinner was partaken of by most of these present, Mr. H. V. Machin, J.P., of Workop, presiding.

National Dahlia—Annual General Meeting.

The annual general meeting was held in London last week, when the following report was submitted:

REPORT OF THE COMMITTEE FOR THE YEAR 1903.

The past summer may, without exaggeration, be described as one of the worst Dahlia seasons on record. The severe frosts during the latter part of June completely destroyed the plants of many growers in the north and midlands, whilst the incessant heavy rains, often accompanied by destructive gales during August and September, together with the extremely low night temperatures of the latter month, made the season (and especially the show period), a most unusually trying one.

The London exhibition was held on September 1 and 2, and, despite the unfavourable season, the exhibits in point of numbers showed the satisfactory increase of 25 per cent., whilst the quality of the blooms was surprisingly good. Nine certificates were awarded to new varieties.

The Manchester exhibition held in conjunction with the Royal Botanical Gardens Society took place on September 11 and 12. The number of exhibits from the north and midlands was seriously curtailed owing to the disastrous effects of the June frosts, but in spite of this, a fairly large number of entries were obtained, and a satisfactory verdict must be passed on this, the first of the Society's provincial ventures. Five certificates were awarded to new varieties.

On September 15 a meeting of the committee was held at the Drill Hall, Westminster, on the occasion of the fortnightly show of the Royal Horticultural Society. Five certificates were awarded to new varieties. The number of certificates awarded to new varieties of all sections in 1902 was twenty-nine, and in the present year nineteen, out of a total of 105 seedlings exhibited.

On September 17, by permission of the Royal Horticultural Society, an inspection of the Cactus Dahlias grown for trial at

Chiswick was held by the committee. A prize of 10s. 6d., the gift of Mr. A. Dean, was awarded to Hobbies, Limited, for "Amos Perry," as the best variety for garden decoration.

The committee desire to convey their best thanks to the donors of special prizes, viz.: Her Grace the Duchess of Sutherland, the President, Messrs. J. Stredwick and Son, Messrs. J. Burrell and Co., Messrs. J. Cheal and Sons, Messrs. Dobbie and Co., Messrs. Keynes, Williams and Co., Mr. S. Mortimer, Mr. A. Dean, Mr. Robert Sydenham, Mr. J. F. Hudson, and Mr. T. Hobbs; also to the Horticultural Club for kindly allowing the Society's meetings to be held in their club room.

The terms offered by the Royal Horticultural Society in view of the opening of the New Hall being considered unsatisfactory, the committee decided to approach the Crystal Palace Company, with a proposal to hold the 1904 exhibition at Sydenham, and an arrangement to this effect has been concluded.

The committee have satisfaction in reporting a considerable increase in the membership of the Society for the year. The number of new members joining has been fifty-five, and the losses through resignations and deaths, nineteen, leaving a nett gain of thirty-six.

The committee, however, regret to observe the growing tendency of new members to avail themselves of the minimum subscription qualifying membership, and they consequently recommend that for the future members be divided into three classes, namely: "Fellows," paying annual subscription of one guinea; "Subscribers" paying annual subscription of half a guinea; and "Members," paying annual subscription of five shillings.

In order to facilitate the allotment of space for the different classes at the Society's exhibitions, and to add to the symmetry and general appearance of the exhibits, a scale of measurements for show-stands and boards has been drawn up. The committee particularly request that members will strictly adhere to these regulations.

The income of the Society from all sources, including the balance of £4 16s. 8d., in the Society's favour from the year 1902, amounted to £228 14s. 2d., and the entire expenditure, including the payment of all prizes awarded at the London and Manchester exhibitions, amounted to £211 4s. 9d., leaving a balance in the treasurer's hands of £17 9s. 5d.

Royal Horticultural, Drill Hall, December 15th.

The last show of the year came as a surprise to most of the visitors, for the hall was completely filled. The chief honours, must, however, be given to the Orchids, which constituted a record for a December show. The collections of Cypripediums were superb. The fruit and vegetable section was the weakest. The collection of deciduous shrub-sprays staged by Mr. E. Beckett was worthy of all praise, and the collection of Evergreens and Alpines attracted much attention.

Orchid Committee.

Present: Harry J. Veitch, Esq. (in the chair); with Messrs. Jas. O'Brien, de B. Crawshay, R. Brooman-White, H. M. Pollett, H. Ballantine, Jas. Douglas, F. Wellesley, J. Coleman, N. H. Bilney, H. J. Pitt, J. Charlesworth, A. McBean, E. Hill, T. W. Bond, W. Gleeson, J. W. Odell, W. Boxall, J. W. Potter, H. Little, W. H. Young, W. H. White, and H. A. Tracy.

Baron Schröder, The Dell, Egham (Mr. H. Ballantine, gr.), sent some grand plants of Cypripediums, together with a few Oneidiums. The chief were C. Mrs. Chas. Canham, a grand piece with over fifty flowers; C. Lceanum var. giganteum, with ten good flowers; C. insigne var. Sanderæ; C. i. Harefield Hall var.; C. Pitcherianum Williams' var., carrying sixteen flowers; and C. L. var. Marsellianum, a beautiful plant; Oncidium ornithorhynchum album, and Lycaste Ballæ were also good.

A beautiful collection was that from Mr. J. Coleman (W. P. Bound, gr.), Gatton Park, Reigate, whose groups consisted chiefly of Calanthes and Cypripediums arranged with Ferns and Asparagus Sprengeri. The Calanthes included C. William Murray, C. vestita rubro-oculata, C. Bryan, in fine condition. The Cypripediums included nice plants of C. Lceanum giganteum and others.

Mr. G. F. Moore (W. Page, gr.), Chardwar, Bourton-on-Water, Gloucestershire, furnished a veritable sea of Cypripediums in a eut state, arranged in vases, and bedded in Maidenhair Ferns. There must have been hundreds of blooms. The chief forms were C. Euryades, C. insigne var. Cobbiana, C. Lceanum var. Fowlerianum, C. i. Bronze King, C. i. var. montanum magnificum, C. L. var. Clinkerberryanum, C. i. var. Sanderæ, and C. Arthurianum.

From Mr. H. Whateley, Kenilworth, came a small collection of choice Cypripediums, a few Odontoglossums, and a plant or two of Zygopetalum.

Messrs. Hugh Low and Co., Bush Hill Park, made a nice display, chiefly of Cypripediums, Oncidium, and Odontoglossums. The best of the Cypripediums C. insigne Dormani, a fine spotted variety; C. Madame Jules Hye, C. i. Laura Kimball, C. i. Mrs. F. W. Moore, and C. i. Harefield Hall var.

Messrs. Cypher, of Cheltenham, staged a small but choice display of Cypripediums, in which were noted C. insigne Dorothy,

C. Maudiae, a beautiful form; C. Venus punctata, and C. Lceanum aureum giganteum.

A few grand specimens came from M. Chas. Vuylsteke, Loochriste, Ghent, Belgium. These included a grand plant of Odontoglossum Harryo-crispum Ridens, a magnificent form; O. Ardentissimum radicans, and Miltonia vexillaria robusta var. autumnalis.

Mr. E. Rodgers, gr. to O. O. Wrigley, Esq., Bridge Hall, Bury, Lancs., contributed a display of Cypripediums cut and arranged in Maidenhair Ferns. They were truly a wonderful collection, but it was difficult to find the names.

A large and well arranged group of Cypripediums, chiefly insigne varieties, were exhibited by Mr. W. G. Budgett, Henbury, Bristol. The varieties were arranged in groups, and very effectively too, many of them carrying a quantity of flowers.

Messrs. Jas. Veitch and Sons, Ltd., Chelsea, staged a nice collection, in which the Lælio-cattleyas formed the chief feature. The best appeared to be L. Semiramis, L.-c. Bryan, L.-c. Epicasta, and C. Luminosa. A few nice Cattleyas and Cypripediums completed the display.

From Mr. N. C. Cookson (H. J. Chapman, gr.), Wylam-on-Tyne, came a grand collection of Odontoglossums and Cypripediums. In the former were noted O. crispum Cooksonianum, a beautifully spotted variety; O. Adrianæ, Cookson's var. The whole flower is covered with well defined dots. The Cypripediums included a fine plant of C. insigne Sanderæ, C. i. Sanderæ; Oakwood Seedling; C. Niobe, and a fine plant of C. Lceanum Clinkerberryman.

Messrs. B. S. Williams and Son, Upper Holloway, staged Lycaste Skinneri, Cypripediums such as C. Lceanum, C. Harrisianum, Williams' var., C. Chloroneurum, and C. L.-c. superba.

Floral Committee.

Present: W. Marshall, Esq. (in the chair); with Messrs. H. B. May, C. T. Druery, G. Nicholson, W. G. Baker, Jas. Walker, R. Dean, A. Perry, J. F. M'Leod, J. Jennings, W. Howe, G. Reuthe, C. R. Fielder, W. Bain, C. Dixon, C. Jeffries, H. J. Cutbush, C. E. Pearson, R. C. Notcutt, H. J. Jones, W. P. Thomson, E. H. Jenkins, C. E. Shea, Geo. Paul, and Harry Turner.

Messrs. W. Cutbush and Sons, Highgate, presented a large exhibit of Conifers, Hollies, and Ivies in great variety. A few of the most striking were Retinospora plumosa aurea, Cupressus Lawsoniana erecta viridis argentea variegata, C. L. lutea. The Hollies were of good colour and clean growth. Many of the Ivies were 7ft or 8ft high, arranged in trios, while the Euonymuses and Pernettyas left little to be desired.

Messrs. T. S. Ware, Ltd., Feltham, occupied a table running the length of the hall, composed of Alpine plants. The Saxifrages, Sempervivums, and Sedums were fine collections, and would doubtless be interesting to lovers of these modest plants. Other fine exhibits were Shortia galacifolia, in its best winter tints; Gentiana acaulis, Thymes in variety, hardy Ferns, and Sarracenia purpurea; also a few nice Hellebores.

Messrs. Thos. Rochford and Sons, Ltd., Turnford Hall Nurseries, Broxbourne, exhibited decorative Crotons in 5-inch pots, all beautifully coloured. The varieties were C. elegantissimus roseus, Golden Gem, and Turnfordensis, a very striking variety, with green and gold leaves, the latter very broad.

Messrs. Jas. Veitch and Sons, Ltd., Chelsea, again made a grand display with their winter-flowering Begonias, some fine plants of Winter Cheer, Ensign, Julius, and Agatha being on view; also some good plants of Gesnera exoniensis.

Messrs. W. Wells and Co., Ltd., Redhill, staged a nice collection of Chrysanthemums, which included large specimen blooms, though the majority were of the decorative type. Madame P. Radaelli, Mrs. Swinbourne, and Mary Inglis were the best of the large flowers. Miss Emily Fowler, Letrier, Mrs. Filkins, King of Plumes, and Weeks' Crimson were the best of the decoratives.

Zonal Pelargoniums were again exhibited by Messrs. H. Cannel and Sons, Swanley. The blooms were arranged in specimen glasses, and a very bright display they made. They were large, and the colours as rich as one would expect to see them in July. The best varieties were Mrs. Simpson, Duke of Norfolk, Mr. Joseph A. Bell, Countess of Jersey, Duke of Connaught, and King Victor.

Messrs. W. Bull and Sons, Chelsea, were represented by a fine group of Palms in fifty species and varieties. A group of cut Chrysanthemums came from Mr. Hemming, The Gardens, Alexandra Palace. Many of the varieties were past their best. Mr. T. Allman, The Nurseries, Wilmington, Dartford, exhibited a good market Chrysanthemum named Allman's Yellow.

Mr. E. Beckett, The Gardens, Elstree, made, perhaps, the most novel exhibit in the hall. It was composed of cut deciduous trees and shrubs having coloured stems, or those of an ornamental character. Some of the most remarkable were Rhus Cotinus, Rhus typhina, Rosa rugosa, Collutea Pococki, Cornus sanguinea variegata, Salix incana, Euonymus europæus, well berried; Leycesteria formosa, and Hydrangea paniculata grandiflora.

Fruit and Vegetable Committee.

Present: G. Bunyard, Esq. (in the chair); with Messrs. J. Cheal, H. Esling, A. Dean, E. Beckett, H. J. Wright, J. Jaques, G. Keey, J. Willard, P. C. M. Veitch, G. Reynolds, F. Q. Lane, W. H. Divers, G. Wythes, G. Norman, A. H. Pearson, J. McIndoe, W. Poupert, and H. Somers Rivers.

The chief exhibit in this section came from Mr. C. Bayer (W. Taylor, gr.), Forest Hill, who staged a nice collection of fruit. The 25 bunches of Grapes which made the background were especially good, Black Alicante, Muscat of Alexandria, and Gros Colman being excellent. These were relieved by coloured Vine leaves and Smilax trails. A Pine and a collection of Apples completed the display.

Mr. E. Beckett, Aldenham House Gardens, Elstree, staged a fine exhibit of Onions. Mr. C. Dixon, gr. to the Earl of Ilchester, Holland House, sent a dish of Pear Glou Moreau in good condition, also a large dish of Beurré Rance. Mr. Chas. Ross, gr. to Col. A. Houlton, Welford Park, Newbury, staged a seedling Pear called R. D. Blackmore, but many of the fruits were past their best.

Mr. A. D. Hall, Harpenden, sent 6 dishes of salad Potatoes, which were undoubtedly curiosities. Mr. C. Bellis, gr. to Mrs. G. M. Faulkner, Fonthill Lodge, Forest Hill, sent a fine basket of Seville Oranges.

Medal Awards.

FLORAL COMMITTEE.—Gold to Messrs. T. S. Ware, Ltd., Feltham; Silver-gilt Floras to Messrs. J. Veitch & Sons, Chelsea, and Lord Aldenham; Silver-gilt Banksian to Messrs. Cutbush & Sons; Silver Flora to Messrs. H. Cannell & Sons, and Messrs. Bull & Sons, Chelsea; Silver Banksians to Messrs. T. Rochford and Sons, Ltd., and Messrs. W. Wells & Co.

FRUIT COMMITTEE.—Silver-gilt Knightian to Mr. C. Bayer, and Silver Banksian to Lord Aldenham.

ORCHID COMMITTEE.—Silver-gilt Floras to Mr. J. Colman, Baron Schröder, Mr. N. C. Cookson, and Mr. G. F. Moore; Silver Floras to J. Veitch & Sons, Mr. O. O. Wrigley, Hugh Low & Co., and Mr. W. E. Budgett; Silver Banksians to Mr. H. Whateley, B. S. Williams and Son, and J. Cypher & Son.

Certificates and Awards of Merit.

Chrysanthemum, Allman's Yellow (Thos. Allman).—A decorative market variety described in these pages last week. A.M.

Croton Turnfordensis (T. Rochford & Sons).—A grand variety with broad leaves, of a rich yellow, edged green. Stems yellow, habit good, will make a popular plant. A.M.

Cypripedium insigne Sunderae, Oakwood Seedling (N. C. Cookson).—A lighter yellow form than the type, with a few spots on the dorsal sepal. A.M.

Cypripedium Leeannum Clinkerberryannum (Baron Schröder and O. O. Wrigley).—A grand variety, having a broad dorsal sepal, white, spotted towards the centre, and green at the base. A.M.

Odontoglossum crispum Mariae (N. C. Cookson).—A beautiful form, the ground suffused with rose, while each petal is clearly marked with chocolate. A.M.

Odontoglossum Harryo-crispum Ridens (M. Chas. Vuylsteke).—A flower of large size, heavily barred with chocolate, the lower half of the lip being pure white. A.M.

Odontoglossum Vuylstekei Vivicans (Baron Schröder).—A grand form, heavily blotched with brown, the lip edged white. F.C.C.

Beckenham: Beautifying Waste Spaces.

On Friday, December 4, Mr. Lovett, F.R.H.S., of Addiscombe, gave a lecture on "The Beautifying and Utilising of Waste Spaces, Railway Embankments, &c." This proved to be highly instructive and interesting, and certainly worthy of a far larger audience than assembled. Mr. Lovett is of opinion that in our country, where too frequently leaden skies prevail, colours more pleasing to the eye might be used than is generally the case. For instance, railway bridges painted the usual purple or reddish brown, would be more pleasing if of a yellowish or sage green, with Ivy planted at the bases of the arches. In the same way the lecturer brought his remarks to deal with unsightly objects in the garden landscape, &c. At the close a hearty vote of thanks was accorded Mr. Lovett and a like compliment to the chairman.—T. C.

Cardiff: Seed-saving.

The fifth meeting of the session took place at the Grand Hotel on Tuesday, December 1, Mr. H. R. Farmer in the chair. Mr. H. Kitley (seedsman to Messrs. Garaway and Co., and representative of the Bristol Gardeners' Association) delivered an excellent lecture on "Seed Testing and Saving," explaining to the minutest particulars the best means to adopt in testing seeds, and best forms of fruits and flowers to select seed from. The lecturer contended most emphatically that deterioration in constitution to a great extent was due to lack of attention in selecting seeds from the best sources. A good lesson was given on seed testing and best times to sow seed in this our changeable climate. The best thanks of the meeting were accorded Mr. Kitley for his excellent lecture.—J. JULIAN.

Sheffield: Onion Culture.

At the monthly meeting there was a good attendance of members to listen to an essay by Mr. T. J. Nelson, of Ashgate Gardens, Chesterfield, on "The Cultivation of the Onion," which proved to be an interesting one. Mr. Nelson is well known as a successful plant, flower, and vegetable grower, as well as an exhibitor, and has grown some large Onions, having produced some this season weighing 2½ lbs each. He described his method of treatment, and exhibited some very shapely and weighty specimens of Ailsa Craig, to which a certificate was awarded. An excellent exhibit of Onions was also shown by Mr. H. Deverill, of Banbury, some Aristocrats measuring 17 in in circumference. "Cocoa-nut" was very fine and weighty, as also was "Ailsa Craig." A red variety, "Challenge," attracted particular attention, being good in colour and shape, and very sound and solid: Certificates were awarded. "Northern Star" Potato was exhibited by the Secretary, and came in for much attention and criticism. The 1904 schedule has been arranged, and should attract exhibits. Prizes of £16, £10, and £6 are offered for a group; £5, £3, and £2 for 36 Roses, in addition to four other classes; £2, 25s., and 10s., for bouquets; 30s., 25s., 20s., and 15s., for tray of 6 vegetables; all being open. As the show will be held in the beautiful grounds of "Holly Court," on August 13, it is hoped the society will be placed well upon its legs.

Ipswich: Judging.

In consequence, no doubt, of the inclemency of the weather, there was but a small attendance of members at the meeting of the Ipswich Gardeners' Society, held on December 3. The president (Mr. R. C. Notcutt) occupied the chair, and the essayist was Mr. W. Messenger, Woolverstone Park Gardens, his subject being "The Judging of Horticultural Exhibits." All gardeners (said the essayist) were more or less interested in shows, and everyone concerned was anxious that the judging should be carried out in a satisfactory manner. In the first place, it was necessary that the schedules should be accurately worded. Great improvement had been effected in this direction in recent years, due in a large measure to the excellent code of rules issued by the R.H.S., a work that should be carefully studied by both exhibitors and judges. Exhibitors should be most careful to grasp the correct meaning of the wording of the schedule, as disqualification was a bitter pill to swallow. With regard to judges, Mr. Messenger said that in his experience it was the conscientious desire of every judge to award the prizes to what, in his opinion, were the best exhibits. To facilitate this, it was essential that their duties should be commenced punctually at the appointed time, and they should not be expected to undertake too much.

POINT JUDGING

should be resorted to in all large classes. In close competition he personally should like to see the number of points awarded displayed publicly. Many amusing anecdotes of the essayist's experience as an exhibitor and judge were interspersed, and added to the interest of a well-thought-out paper. A brisk discussion was initiated by Mr. J. Morgan, and sustained by Messrs. Cotton, Whittel, A. Creek, Barker, C. Creek, Kedgeley, Adcock, &c., the proceedings closing with a cordial vote of thanks to the reader of the paper.—E. C.

Liverpool: Cut-flower Supply.

The meetings of the above association are becoming more popular, and the attendance is all that could be hoped for. Especially are the younger members of the craft in this district attending well, and who came forward in large numbers on the 5th to hear Mr. Horne, Dawpool, Cheshire, give a discourse on "How to obtain a continuous supply of indoor cut flowers for home use, with cultural details." The subject being of such a wide and varied character, Mr. Horne could only touch slightly on the cultural points. A few of the principal subjects mentioned were as follows: Azaleas, Amaryllis, Begonias, bulbs in variety, forced in boxes; Celosias, Cyclamens, Chrysanthemums, Carnations, Encharis, Forced Lilac, Gladioli, Lily of the Valley, Liliums, Orchids, Poinsettias, Rhododendrons, Richardias, Roses, and Spanish Irises. A very instructive discussion followed on how best to succeed in forcing Lily of the Valley, Mr. Horne advocating the use of good soil for this purpose, and systematic feeding with liquid cow manure. Several members disagreed on this point, preferring to plant the crowns in cocoanut-fibre, and have no feeding. Mr. Horne also succeeds well with Iris hispanica, forcing over one thousand plants annually, ninety per cent. of which produce good spikes. His method of procedure is to pot the bulbs on arrival and plunge out of doors in ashes until the pots are well filled with roots. About Christmas they are in this condition, and are then removed into a cold frame, and subsequently given a little heat. He attributes his success in a great measure to securing well-ripened bulbs and allowing them to progress slowly. He secures flowers in March and April. A point raised afterwards was the watering of plants, two members

advocating the use of the hose-pipe with discretion from April to October inclusive in lieu of the watering-can, their contention being that plant pests, i.e., fly, thrip, bug, &c., were kept under; clean and healthy growth the result, and a great gain in time and labour. A vote of thanks being passed to Mr. Horne, and Mr. Foster for presiding, a most instructive and pleasant evening terminated.—J. S.

Metropolitan Public Gardens Association.

OPEN SPACES.—At the monthly meeting of the Metropolitan Public Gardens Association, 83, Lancaster Gate, W., the Hon. Dudley Fortescue, Vice-chairman, presiding, a request from the Grocers' Company that the Association should continue to maintain the garden in Princes Street on behalf of the Company, was received and agreed to. A letter was read asking for the assistance of the Association in the laying out of the Norfolk Square area, Islington, to the retention of which, as a public recreation ground for a very crowded district, the Local Government Board, on the representations of the Borough Council and the Association, had at length assented; and it was agreed to deal with the matter at the next meeting after certain requisite information had been obtained.

It was decided to protest against a proposal to extend Rosebery Avenue by way of Duncan Terrace to the Essex Road, which would have the effect of extinguishing one public garden laid out by the Association, as well as several green strips that it is hoped to eventually acquire as an addition thereto. Remonstrances were received against building operations upon the Duke of Westminster's garden in Duke Street, which for some years the Duke, at his own expense, had opened to the public, and in reply to its representations that the space should be spared, the Association was informed by the Duke's agent that the building was a transformer station, mainly underground, and that it would have a flat roof rather above the level of the roadway, enclosed with a stone balustrade, which would be tastefully laid out with shrubs, trees and seats for public use.

The St. Thomas's Hospital authorities wrote expressing regret that they could not see their way to abstain from building on the triangle in Lambeth Palace Road. Proposals for dealing with Golden Square, W.C., and Poplar Churchyard were considered.

It was stated that tree planting at Queen's Road, Battersea, and St. Thomas's Street, S.E., had been completed, and that similar work in Lamb's Conduit Street and elsewhere was in hand. It was agreed to ask the First Commissioner of Works to spare certain portions of the Duke of York's School site, containing fine trees adjacent to existing thoroughfares, and to plant double the number of trees in the processional route now being formed in the Mall than would eventually be needed.

The question of the preservation of London squares, with special reference to Edward Square and Pembroke Square, which, it was stated, had recently been sold by auction, was further considered. Progress was reported in regard to schemes for extending Hampstead Heath, and for acquiring an estate at Upper Clapton, and communications were received from the Director of Kew Gardens, asking that the Association should make efforts to preserve Lots Eyot, an island opposite the Gardens, which is threatened with building operations.

Chester Paxton—Annual Meeting.

Mr. N. F. Barnes, Eaton Gardens, presided over the annual general meeting which was held at the Grosvenor Museum on Saturday. The hon. secretary, Mr. G. P. Miln, in presenting the annual report and balance-sheet pointed out that the exhibition of fruits and Chrysanthemums held in November was the best in the history of the Society. A number of new members and subscribers had been added to the list, this now standing at over 500. The Society's finances had also been augmented, there now being a surplus in hand of over £65. On the proposition of Mr. Robt. Wakefield, the report and accounts were adopted, and a hearty vote of thanks accorded to Mr. Miln for his valuable services. Major MacGillivuddy was re-elected hon. president, and Mr. N. F. Barnes chairman of committee. Mr. R. Newstead, A.L.S., was also re-elected consulting naturalist. A unanimous wish was expressed that Mr. Miln should again undertake the duties of secretary and treasurer, to which he consented, and the following were elected to serve on the committee for the ensuing year:—Messrs. A. W. Armstrong, John Breen, J. Clack, John Dutton, A. Ellams, C. Flack, T. Gilbert, John Jackson, H. G. Little, G. Lyon, S. May, C. Nixon, H. Pierce, Wm. Pringle, Josh. Ryder, J. D. Siddall, E. Stubbs, Robt. Wakefield, John Weaver, and John Wynne. It was resolved that the next exhibition of fruits and Chrysanthemums be held on November 16 and 17, 1904.

[We regret that pressure on space has necessitated the holding over of reports from Bristol and Sheffield.]

Young Gardeners' Domain.

Begonia, Gloire de Lorraine.

Being a constant reader of your valuable *Journal*, and seeing space allotted for young gardeners, I would like to pen a few lines on the culture of that beautiful Begonia, *Gloire de Lorraine*. I prefer to take cuttings at the end of March, as the best cuttings are from suckers. Put them singly into very small pots, and place them in a brisk, moist bottom heat. When rooted, add a little air to the propagating case, and in a few days place them on a shelf near the glass in a warm house, say 60deg Fah., at night, rising to 70deg Fah. in the daytime. When they have been there a few days, pot them into 60's, and grow them in the same temperature. This Begonia likes a warm, moist atmosphere, and should be shaded from direct sun. Pot the plants on, as required, and then place them again in the same temperature, and when they have nearly completed their growth, place them in a house of 50deg Fah. at night, rising to 60deg Fah. in the daytime, with a little air added to the top of the house; side draughts must be avoided. Care must be taken with the water-pot, as it is an easy matter to over-water and cause the plants to damp off. We have beautiful plants 28in high and 2ft across.—SECOND GARDENER.

Chrysanthemum Cuttings.

The present is a good time for inserting cuttings of some of the later flowering varieties of Japanese Chrysanthemums, the last week of December being the most suitable time for inserting the bulk of the midseason varieties with, of course, a few exceptions. There are many different methods of striking, but the one I prefer is as follows: Place a required number of clean, well-fitting hand-lights on some pieces of slate, on a stage or floor of a light house, in which a temperature of about 50 deg Fah. is maintained, and over the slate bottom spread a layer of about 2in of moist, sifted ashes. Take your cuttings (root-cuttings, if possible) which should be about 2½in long, and prepare in the usual manner.

Prepare a number of large 60-sized pots, by nearly half-filling them with crocks, and then placing a layer of coarse leaf mould on top. Fill these with a soil consisting of two parts loam, one of leaves, and of sand, which should have been thoroughly mixed and passed through a ¼in sieve, and press down fairly firm. Place five cuttings round the edge of each pot and give a soaking of water. Then place them in the handlights and keep the cuttings from flagging by frequent overhead sprinklings, removing the tops of the handlights each morning for an hour to let the excess of moisture escape, otherwise keeping close. All damped leaves and cuttings should be instantly removed, as they tend to affect others.

As the cuttings commence to root, a little air may be afforded them on favourable occasions, and this can be increased gradually, if the cuttings do not flag, until they are well-rooted, when the lights may be removed entirely. Below are given a few varieties which require a longer season of growth:—Mad. Paolo Radaelli, General Hutton, Mafeking Hero, Calvat's Sun, J. R. Upton, Mrs. E. Hummell, Dorothy Pywell, Australie, Mrs. H. Weeks, Mad. Herwege, Wilfred H. Godfrey, and Durban's Pride.—E. B., South Berks.

[The answer by "Scot" to the criticism on his article entitled "Principles of Propriety" arrived too late for insertion in the present issue.]

PUBLICATIONS RECEIVED.—"The British Canadian Review," a weekly chronicle of the growth of Canadian enterprise, Vol. XIII., No. 343. . . . "Garten Flora," Nov., with coloured plate of *Odontoglossum crispum Marienfeldiense*. . . . "Le Moniteur d'Horticulture," Dec. 10, with coloured plate of *Lælia* (syn. *Cattleya*, Lindl.), *crispa*, Reich. . . . "Orchid Review," December, with a beautiful half-tone illustration of *Habenaria carnea*. *Cypripedium* (or *Paphiopedilum*, as systematists now call it) *Godefroyæ* and its allies are here treated; also Orchids in the sub-alpine Cordilleras of South Mexico, Orchids in season, Calendar of Operations for December, and other articles. Price 6d.

"The Garden Diary." George Allen, London, 3s. 6d. This is a little book bound in stout covers, and having a page for every day in the year. The lower half of the page is left blank for notes, while the upper half contains a selected verse from the poets. For every month, too, there are cultural directions. The authoress is Rose Kingsley. * * * "Monograph of the Coccidae of the British Isles," Vol. II., by Robert Newstead. London: Printed for the Ray Society. * * * "The Heather," by Alex. Wallace, editor of the "Florists' Exchange," New York. * * * "Some Lesser-known Japan Trees and Shrubs, and Some Recently Introduced Trees and Shrubs from Central China," by James H. Veitch, F.L.S., 1903. Reprinted (with illustrations) from the Journal of the Royal Horticultural Society. * * * "Hints," October, 1902, to September, 1903—Domestic, Literary, Gardening, Social, &c. No. 1, Vol. I. Offices: 115, Chancery Lane, London, W.C. * * * "Garten Flora," Dec. 1, with coloured plate of *Costus Friedrichseni*.



Fruit Forcing.

VINES: HOUSE TO AFFORD RIPE GRAPES IN MAY.—

The structure for this purpose should be started without delay. A bed of leaves and litter in a state of fermentation placed on the floor of the house, turning a portion of it daily so as to supply ammonia to the atmosphere saves fuel, and conduces to good break by constantly giving it moisture and warmth. Outside borders should have the needful protection from cold rains, snow, and frost; a few inches thickness of dry leaves and a little litter over them answer where the Vines are planted inside, but where the border is all outside a covering of warm litter is preferable, two-thirds of leaves and one-third of stable litter affording a less violent heat than manure alone, also more lasting, adding fresh material as necessary. The inside border must be made thoroughly moist by applying water, or, in the case of weakly Vines, liquid manure, not too strong and never less in temperature than the mean of the house. Avoid, however, making the soil very wet, for that hinders root formation and tends to a soft growth, often resulting in shanking. Start with a night temperature of 50deg in severe weather, 55deg in mild weather, and 65deg by day, except when the weather is cold, when 55deg will be more suitable. This slow work is better than a high forcing heat, which induces a weak growth, and we do not advise these temperatures to be exceeded until the growth commences. Depress young canes to the horizontal line, or lower, to ensure the regular breaking of the buds. Maintain a moist atmosphere by syringing occasionally, but avoid excessive moisture and keeping the roots dripping wet, which excites the production of aerial roots from the rods.

LATE HOUSES.—Vines that have the foliage all off will only require fire heat to exclude frost, but there must not be anything like a moist, stagnant atmosphere, or the Grapes will speedily damp and decay. Leaky roofs are a chief cause of Grapes keeping badly, and wide laps are not much better, as the wind drives the water from them all over the upper side of the berries, causing them to spot and rot. Grapes cannot be kept under such circumstances, and the sooner they are cut and bottled the better. A temperature of 40deg to 50deg suffices for the thick skinned Grapes. Muscats require a mean temperature of 50 deg. The air must be kept in motion by a gentle warmth in the pipes, and ventilation given whenever there is a chance of securing a change of air without danger of letting in more moisture than expelled.—ST. ALBANS.

Kitchen Garden.

BLANCHING ENDIVE.—A few roots may be blanched at a time. To carry out the process outdoors, tie the points of the outer leaves together, thus enclosing the heart, and cover with inverted pots, stopping the drainage hole with a piece of clay, or laying a slate over. If frosty weather is anticipated, a number of roots should be lifted, with plenty of soil adhering, and placed in a frame. Cover the plants to blanch, and also darken the frame with mats to assist the blanching and exclude frost. A dark room or cellar will also serve for blanching at this season.

LETTUCES IN FRAMES.—Attention must be given to affording free ventilation to plants in frames, and picking off all dead leaves. Dryness of the foliage is essential, for much moisture collecting at the base of the leaves will soon cause the hearts to rot.

ONIONS.—The stock of Onions in store ought occasionally to be looked over, as some bulbs are liable to decay. So long as Onions can be kept safe from frost they cannot be kept too cool. If thoroughly dry and firm a slight frost will not harm them. Damp air is an enemy, as it causes them to grow. An excellent method of keeping Onions is to string them in ropes.

POTATOES FOR POT CULTURE.—Medium sized sets of early varieties, such as Ringleader, Sharpe's Victor, or Royal Ashleaf, may be selected and stood in shallow boxes. Scatter some light leaf soil between, and place the boxes on a light shelf in a warm pit or greenhouse. Occasionally sprinkle with water to induce sprouting. When growths show, thin all out but the principal and strongest. As roots will also push into the soil, it is desirable before they become too much matted together to pot the tubers, placing one in the centre of a 10-inch pot which has been moderately drained and half filled with a mixture of leaf soil, loam, and rotted manure. Keep the pots in warmth at first, and give but little water. Top dress when the growths are high enough, and to ensure a stocky growth choose a very

light position with less heat, but plenty of air on favourable occasions.

FORCING SEAKALE.—A batch of Seakale roots which have been prepared for forcing should now be introduced into a warm structure. A good mushroom house or warm cellar is, of course, the best place. A space should be enclosed for holding soil of a depth sufficient to bury the roots to the crowns. If a bed of soil is not convenient, employ deep boxes or pots. Light is easily excluded from these by inverting other pots or boxes over. A temperature of 55deg will suffice. Hard forcing is not productive of good results, the growth being weak and stringy. Keep the soil moist. Fresh batches may be introduced weekly or fortnightly, according to the demand.

RHUBARB.—Place an additional lot of roots in the forcing house or warm structure, these being intended to follow the earliest supply. Rhubarb will do well either in a light or a dark place, providing the roots are kept moist by the natural humidity of the atmosphere, or surrounded with soil, which should be watered occasionally. Usually the best results follow a certain amount of blanching; therefore, if a dark structure is not available, cover the crowns with boxes or tubs.

FORCING ASPARAGUS.—This vegetable is best forced on a well prepared hotbed, employing roots three or four years old. The hotbed should be a mixture of leaves and manure, and built in the open, so that a frame may be placed on the top, and linings of manure added on the sides to keep up the temperature as necessary. Cover the manure with several inches of soil, and on this place the roots thickly together. Fill in between and over them with light compost, consisting of loam, mushroom bed manure, and leaf soil, covering them to the depth of four inches. Give a good watering with tepid water. Admit air when necessary to regulate the temperature, which may range between 60deg and 70deg. In cold and frosty weather cover the glass with mats.—EAST KENT.

Weather Notes.

In the North.

The first half of December has brought samples of all sorts of weather—rain, snow, frost and thaw following each other in short and uncertain succession. Some of the days, from fog and cloud, have been very short; the nights dark and unpleasant. During the fortnight frost of from 2deg. to 15deg. has been registered, mainly in the former week. A period of dull and drizzly weather has again set in from the 10th to the 14th.—B. D., S. Perthshire.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass
December.		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
Sunday ... 6	W.N.W.	deg. 31.8	deg. 31.5	deg. 42.4	deg. 27.5	Ins. —	deg. 39.2	deg. 44.1	deg. 48.6	deg. 27.5
Monday ... 7	S.E.	41.9	38.9	45.3	30.3	0.13	39.3	43.7	48.3	21.3
Tuesday ... 8	S.W.	43.7	41.4	48.6	36.0	0.15	39.9	43.6	48.1	25.8
Wednesday 9	S.S.E.	47.7	47.1	52.6	42.9	0.18	41.4	43.9	47.9	35.5
Thursday 10	S.S.E.	47.4	44.9	51.1	41.3	0.37	42.4	44.2	47.8	31.8
Friday ... 11	W.S.W.	41.5	40.1	47.8	38.9	0.10	42.2	44.5	47.6	29.0
Saturday 12	E.S.E.	40.7	39.9	47.3	36.5	0.28	41.6	44.4	47.5	25.8
MEANS ...		42.1	40.5	47.9	36.2	Total. 1.21	40.9	44.1	48.0	28.1

The weather has been dull, and at times very dark, with rain on six days, bringing the total rainfall for the year to date to 36.45 in.

The Potato Boom.

Professor W. J. Malden, in the "Spalding Free Press," gives vouchers of sales at the rate of 5lb. and 10lb. of Eldorados at £40 per lb. He anticipated that at Smithfield Show no Eldorados would be sold under £50 per lb., or at the rate of £17 per Potato. The actual sales tripled his forecast. The Professor points out that at £3 per lb., or £300 per cwt., the result will be, after two years, in spite of what seems such an alarming primary outlay, the Potatoes will not have cost 4d. per lb. The calculation works out thus:—As 1lb. of Potatoes easily produces 100lb., the produce of 1lb. at £3 per lb. is worth £300. To carry it a year forward, the 100lbs. will produce at least 100-fold, or 10,000lbs., or nearly 4½ tons; the outlay to produce these during the two years will not amount to £100, so that for £150 the 4½ tons are raised.



** All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.

RUST ON CHRYSANTHEMUM LEAVES (Gardener).—Badly attacked by "Rust" (*Puccinia Chrysanthemi*). The only cure is to burn the plants. See reply in "J. of H.," page 478, November 19.

GROWING MUSHROOMS IN BOXES (Omega).—Yes, Mushrooms can be grown in boxes without bottom heat in a glass house the temperature of which will not be allowed to fall below 40deg. The boxes may be 3ft in length, 15in wide, and the same in depth. Mushrooms may also be grown in large pots, using chiefly horse droppings and dried cowdung, placing in a greenhouse or a deep cellar where frost does not come.

ANGLE OF ELEVATION FOR VINERY (Idem).—The best general angle of elevation is 40deg, especially in structures where little fire heat is employed, as it is important that the heat should be distributed as equally as possible throughout the whole of the interior of the house, for the sap naturally to flow in greatest force to the upper parts of plants, all circumstances being the same, but it is also attracted to where there is the greatest heat, and if this is at the top there is a double tendency to that part; whilst, on the contrary, the lower portion suffers no undue diminution in proportion. Now the higher the pitch of the roof the greater the accumulation of heat at the upper angle, so that we may say the lower the pitch the less the difference between the temperature of the air at the top and bottom of the slope. Owing to this it becomes desirable to keep the slope as low as is consistent with the admission of abundance of light. An angle of 40deg is also suitable for a Peach house.

MOVING YEW TREES (H. S.).—The Yew is a very tractable subject, and may be moved with facility, only care is taken to retain a considerable amount of ball, and consequently young roots in lifting, these being produced freely from the collar or large roots retained in lifting, the operation taking place in the spring when the Yew is on the point of starting into growth, and choosing showery weather for the operation. We have moved trees quite as old as those you mention, the heads being curtailed correspondingly with the loss of roots, the Yew breaking freely from the old branches and even bole when these parts only are left. In the case of a hedge of fifty to sixty years of age there may be considerable difficulty in taking up, the trees with sufficient roots and balls of soil to ensure success, as they will be very hard to separate in the line or between each tree, though what is lost in line may be gained sideways. As you are in the habit of moving large Conifers with success, we have no doubt you will also be able to remove the Yew successfully, or at least form a definite conclusion as to its practicability or otherwise from the foregoing remarks.

MUSCAT OF ALEXANDRIA VINES NOT RIPENING THE WOOD (Head Gardener, G. H.).—The wood of the lateral is quite green, large in pith, and somewhat long-jointed, and also not strong. It usually arises from the conditions of soil and of atmosphere being such as to favour sappiness of growth, the border being of a rich nature and not containing sufficient opening, or mineral substances, such as calcareous and siliceous matter, especially the latter. It sometimes results from too low a temperature and a deficient amount of space and ventilation. This, probably, is applicable to your case. Indeed, we should say that the soil has been kept too wet, the atmosphere too close, and the temperature too low. Under the circumstances we should keep the border as dry as consistent with the health of the foliage, and a temperature of 60deg to 65deg at night, with 10deg to 15deg or more advance from sun heat, admitting air freely, even some by night. But the season is so far advanced that little can be effected. If you give the border a dressing of the following mixture, it would probably assist the Vines in the coming year. Dissolved bones dry and crumbling, 3 parts; sulphate of potash, 2 parts; sulphate of magnesia, 1 part; sulphate of iron, $\frac{1}{2}$ part; mixed; applying 4oz of the mixture per square yard, and pointing in very lightly, not interfering with the roots. Keep drier at the roots another season, afford every lateral or bearing shoot plenty of space for development and full exposure of its foliage to light, ventilating freely and securing a good heat, even in the early stages of growth.

FLORIST AND POMOLOGIST (Mrs. W. B.).—This is long since defunct.

JUMPING BEANS (S. Fielding).—We will reply by letter in a day or two. Meanwhile, many thanks for the short article.

THE BANKSIAN ROSE FLOWERING (Rev. W. H. J.).—In a topsy-turvy season, what conclusion can one come to? Certainly it is late, but Homère we have had flowering at Christmas. You are fortunate to get it to flower at all.

SLIDES FOR LANTERNS (X. Y.).—We do not know of anyone who systematically lends out lantern slides. You can get them made at various places. If you care to communicate with Mr. John Gregory of 62, Canterbury Road, Croydon, you will receive fuller information on this subject than we can furnish.

VINE ROOTS DECAYED (Gardener).—We will examine them and report more fully. The border and the roots, however, have evidently been grossly neglected. Follow hints given by "St. Albans" under "Work for the Week." Our correspondent repeatedly, and at length, urges inspection of roots and borders, and describes remedies.

NAMES OF FRUITS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (F. F.).—1, King of the Pippins; 2, Allington Pippin; 3, Cox's Orange Pippin; 4, Wellington.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (R. A. Clark).—Your specimens had been overlooked; they will be named in next issue. (J. T.).—*Schizostylis coccinea*. (N. O.).—1, *Adiantum trapeziforme*; 2, *A. concionum*; 3, *A. macrophyllum*; 4, *A. Lindenii*. (J. B., Berks.).—1, *Ilex Aquifolium angustifolia*; 2, *I. ferox argentea*; 3, *I. flavescescens*; 4, *latifolia*; 5, *I. laurifolia*; 6, *I. ferox aurea*. (N. N.).—1, *Fuchsia triphylla*; 2, *Cytisus filipes*.

The Bee-keeper.

The "Hexagonal" Stewarton Hive.

I am pleased to learn that my articles have been taken advantage of beneficially by "Hexagonal" and with regard to the merits and demerits of the Stewarton hive, I will endeavour to embrace all the points upon which he seeks information, and those which influenced my selection of the modern "W.B.C." for general utility in my own apiary.—E. E.

QUERIES.—"Will you kindly inform me through your columns which is the largest, the wasp or the hornet; also if a Queen wasp or bee have stings?"—X. Y. Z.

Trade Catalogues Received.

James Veitch and Sons, Limited, Chelsea.—(1) *Vegetable and Flower Seeds, 1904*; (2) *New Chrysanthemums*; (3) *Border Carnations and Picotees*.

Sutton and Sons, Reading.—*Seeds*.



"Something Wrong in the State of Denmark."

Such was the quotation (only that we have substituted "wrong" for "rotten") we found in a letter from a farmer friend the other day, a man who farms, and farms successfully, a wee bit of the best land that lies out of doors: a farm that has in years past been almost equal to a little gold mine. It has been in the hands of one family for nearly a century, and they have put good work and good money into it. And now this man writes a sad tale of woe. He has been hit hard; not knocked out of home altogether, for we don't think that would be done; but he pauses and wonders how he is going to balance accounts this year of grace, 1903.

He writes that the first step towards anything better for the agriculturists of England is a thorough revision of the land laws. There must be a better and easier method found of selling and buying land. There is no question as to this. A man who can afford to purchase a large estate is in a position to care very little for any conveyancing fees. It is the poor, struggling man

who wants a few acres freehold, that he may improve and pass on to his heirs. He is the man that suffers. To begin with, the small parcel of land he requires is always sold at a price far beyond its actual value. Yes, we know all about that: that price is a criterion of value. It is not! There is such a thing as inflated value. There are so few small lots in the market, that the competition is keen, too keen, to be justifiable. The small man gets his little plot. It will take him all his time to make it earn anything like a fair percentage, but that is not all. Before he becomes the actual possessor there are fees to the lawyers acting for vendor, as well as the fee his own representative will require, *and we think the expense is far out of proportion to the work done.* We know, of course, that there has been an improvement in the transfer of land, but still there is room for far more improvement.

It is well known that a man will work better for himself than for a master, and naturally he will strive to improve his own property to the best of his ability, and by thus doing *adds to the health of the community.* There is another point we are very anxious about just at present. Some say we are on the eve of a general election, others pooh, pooh, the idea altogether. It may come upon us as suddenly as did the last, and where shall we, as farmers, be in case the party in power will not renew the relief that has of late been afforded in respect to the rates laid on agricultural land? Most of us will think that if anything, we shall want rather more relief. What if we lose that which we have already obtained? We see to-day one generous landlord has remitted the whole of the half year's rent. Many may be willing to help their tenants, but very few can afford, in justice to their own families, to do so. No doubt there will be some handsome returns, but we think that we cannot fairly look to landlords to do much more than they have been doing, and it will very ill fit with present times if we are to go back to our old and heavy ratings.

* * *

Now to another subject. Here we are short-handed. There is work to do, and very few men that can be found to do it. This district is not peculiar in this. Look through any agricultural paper, and complaints as to the scarcity of men will be found to be most general. Wages are good; houses are cheap; hours are short. Farmers don't do much work by candle power. This is how we are fixed. Now turn to another aspect of affairs. On Friday, December 4th, a labour bureau was opened for the unemployed in a large city in the N. of England. Before 5 p.m., 1,171 men had entered their names as desirous of a job. If the Corporation can make work they will, for good men, provide employment for three days in the week, and pay 11s. 3d., preference being given to married men with families. Of course we know it is the old story—Impossibility of getting master and man in touch; but surely this should not be so in these days of easy transport. Why do the men flock to the towns? Certainly not in this case to better themselves. Of course it will be urged that many of these unemployed would be of no use on the land. There we think is a mistake. The towns are recruited from the country, and they are not submerged or lost. The Irish workers who come over at harvest time, manage to leave their wives and families behind for a season, and surely the same might be done if these townsmen really wanted a job badly. We fancy they have not much stomach for dirty, wet, cold field work.

* * *

We have scattered throughout the country many experimental farms; some of long standing, some comparatively modern. That they are of service to the cause of agriculture, few of us doubt; but there is a great doubt as to whether they might not be even more beneficial than they are. They cannot extend their operations if short of funds, and there is a general feeling that any supplementary funds must not be derived from the rates. Here is a great danger to guard against. These experimental farms must not be looked upon as happy hunting grounds for professors with fads, who want to work out little pet theories. We sometimes wonder if the committees of management are quite qualified to guide the professors, or whether their management exists in name only. We don't want to saddle ourselves with old men of the sea, who choose the tune while we pay the piper. There are people crazy for anything new and untried, or perhaps comparatively untried. The fact that a thing is new is quite enough. The new thing before the public at present is the motor, as applied to field work. No doubt it is one of the most useful of modern inventions, but we are not disposed to part with all our shires at once and invest the money in motors. We doubt whether the money would go far enough! However much work a motor can do, or however quickly, there is one certain fact:—it can't be in two places at

once, nor can it be occupied on two jobs at one and the same time. It may be used to supplement, but not entirely to supersede, horse power. A very small lad can be trusted out with a cart and horse, to fetch a load of Turnips, but we doubt if many "big boys,"—that is, inexperienced farm men, could be trusted out with an expensive motor. We shall have to have a race of mechanical labourers trained before we are ready for motor power, and it alone.

Farmers' sons and pupils may enjoy the management of the motor now, whilst it is a novelty; but when the charm of novelty has worn off, their enthusiasm will have paled. We have found that machinery has a way of breaking down at critical moments, and we have also found nothing quite so bad to sell as machinery that is not up-to-date. We doubt if, at a farm sale, two or three motors would make anything like the money they cost: whereas the teams of draught horses are always a very convertible asset. Until the price of the motor gets a little lower (£350), we scarcely would advise the farmer of a medium-sized farm (of 400 acres) to sell his light horses and invest in one.

A great point in favour of the motor is that, on strong tenacious clays, there is little treading. We do not know the exact proportion of strong v. medium, and light soils, but we still hold to the opinion of others, wiser than ourselves, that the treading of these soils during cultivation by horses, is a decided advantage. Wheat must have a solid seed-bed, and to be kept free from the ravage of wireworm, hence the solidity of the soil must be maintained.

We can afford to laugh at those visionaries who would have us cut corn and thresh it the self-same day, because the seasons when such operations would be successfully carried out will only come once or twice in the longest lifetime. The writers who suggest such things must know very little about "conditions." However dry corn may appear when led and stacked, it invariably gives again, and there is nothing that puts doubtful grain into such good "fettle," as being in a well-made stack. We are told, too, we are in the habit of cutting all our corn too green, hence the inability to thresh and sell at once. If the corn were the whole and sole object, we could afford to let it stand till dead ripe: in that case the valuable straw would lose a great deal of its nutritive quality; beside, too, a gale of wind playing upon very ripe corn in a few hours would make it not worth cutting or threshing.

There is another point, too, that needs consideration. If all farmers threshed at once, the markets would be flooded with indifferent samples; for certainly on no farms we know, is the granary accommodation equal to the proper preservation of the entire grain crop: and as one, or at most, two days' threshing, fills the barn to repletion with chaff, a great quantity of valuable food would stand much chance of being lost or wasted.

Work on the Home Farm.

Changes from frost to snow, from snow to rain, and back again to frost, have quite put an end to all ideas of finishing off the Wheat sowing, and if we sow any more it must be put in early in February. We are able to continue ploughing lea for Potatoes, but the work is harder for the horses than it was. We have noticed young Wheat showing above ground in one or two fields. One which would otherwise have looked rather promising has been cropped off by rabbits from a neighbouring cover, which is rather hard on the tenant in these times.

On any but the driest soils sheep are having a bad time in the Turnip fold, which is a mass of batter. It seems folly to keep sheep on Turnips under such conditions, but recent experience has taught farmers that it is wise to get their roots eaten off and their spring corn sown in good time. So many late-sown crops have been ruined by wet weather that everyone now is making a special effort to sow early. We fancy there are not so many spare roots this year as last, as Swedes are decidedly on the small side, and as there is plenty of grass in the old pastures, we should prefer to take our sheep on to sound lair and risk being late with the spring sowing.

Everyone is busy pig-killing. Farmers who are not killing for their own use are killing the pigs which form part of the wages of the yearly labourers. Food has been plentiful, and pigs are weighing well. A few words on bacon-curing may not be out of place. For a large pig, 4oz of saltpetre should be used, and well rubbed into the meat before the salt is put on. We use a large 6d. lump of salt, which is first well crushed. A little is laid at the bottom of the salting-tub, then the hams, after having been well rubbed with saltpetre and then with salt, are laid with the cut side upwards in the tub. The shoulders, which we always sever from the remainder of the flitch, are served the same way, the flitches being laid on the top. A little salt is laid on each portion, but more on the hams and shoulders than on the flitches. We have begun our Xmas markets, but the beef trade is disappointing. The mutton trade is good.

RIVERS'

FRUIT TREES, ROSES, VINES, FIGS, ORANGES, AND Orchard-House Trees.

▲ LARGE AND SELECT STOCK
ALWAYS ON VIEW.

ILLUSTRATED & DESCRIPTIVE CATALOGUE,
Post Free, 3d.

THOMAS RIVERS & SON,
SAWBRIDGEWORTH, HERTS.
HARLOW STATION, G.E.R.

LONDON FERN NURSERIES,
LOUGHBORO' JUNCTION, LONDON, S.W.—Stove and Green-
house Ferns, large and small, in var., Aralias, Grevilleas,
Cyperus, Ficus, Ericas, Palms, Dracenas, Aspidistras, Roses
Azaleas, Carnations, Crotons, Camellias, Chrysanthemums,
Cyclamen, Bouvardias, Asparagus, Araucarias, Solanums,
Aspidistras, Cinerarias, Genistas, Marguerites, Geraniums,
Primulas, Orange Trees, &c. Trade, send for Wholesale
List. Special Retail Catalogue, free.—J. E. SMITH.

NEW CHRYSANTHEMUMS.

See Special Novelty List—now ready,
Also general Catalogue, both post free on application.

Thousands of strong healthy plants, specially
prepared for Exhibition, in all the leading varieties,
from 4s. per dozen, ready in February.

NORMAN DAVIS,
Chrysanthemum Nurseries,
FRAMFIELD, UCKFIELD, SUSSEX.

KEYNES' ROSES. Best Plants.
Best Varieties.
Moderate Price.
Catalogues Post Free.

KEYNES, WILLIAMS & CO.,
Rose Growers, SALISBURY.

BY SPECIAL APPOINTMENT
ORCHIDS—ORCHIDS
QUANTITY IMMENSE.

Inspection of our Range of Houses
TO HIS MAJESTY THE KING. IS CORDIALLY INVITED BY

HUGH LOW & CO., BUSH HILL PARK,
MIDDLESEX.

GRAPE VINES in POTS

Extra Strong Fruiting and Planting Canes
in all Leading Varieties.

FIGS IN POTS

All Leading Sorts.
Bushes and Fan-trained for Walls.

DICKSONS Nurseries CHESTER

No. 1226.—VOL. XLVII., THIRD SERIES.

CLIBRANS

NEW SINGLE CHRYSANTHEMUMS.

OUR List of the above for 1904, together
with the choicest New Varieties of
other classes from all sources, will be ready
early in January.

Gratis and Post Free on Application.

CLIBRANS

GENERAL LIST of CHRYSANTHEMUMS.

Extending to 58 Pages, and containing the
finest selection of varieties in every section,
fully described and priced, together with
index, is now ready.

Gratis and Post Free on Application.

ALTRINCHAM & MANCHESTER

DICKSONS

HARDILY - GROWN
**FOREST, FRUIT,
AND ALL OTHER
TREES & PLANTS
EVERGREENS,
ROSES, &c.**

Stocks quite unequalled for
'QUALITY,' 'VARIETY,' & 'EXTENT.'
Priced Catalogues Post Free.
NURSERIES 500 ACRES.

CHESTER

PRICE 10d., POST FREE. WINDOW GARDENING FOR THE MANY

Or Instructions for Managing Plants in rooms throughout
the year, with Special Directions for their Propagation and
Culture.

Office: 12, MITRE COURT CHAMBERS, FLEET STREET, E.C.

1500,000 BULBS.

Spanish Iris, Yellow, White, and Blue	7/6 per 1000.
Crocus, all colors	5/6 per 1000.
Sir Watkin Narcissus	5/6 per 100.
Horsefieldii	5/6 per 100.
Trumpet Narcissus	7/6 per 1000
Glory of Leiden Narcissus	6d. each.
Madam de Graaff	3/6 each.
Sweet Scented Pheasant Eye Narcissus	5/6 & 7/6 per 1000.
Mixed Narcissus	5/6 per 1000
Double Daffodils	5/6 & 10/6 per 1000.
Tulips, Mixed (choice)	2/6 per 100.
Single Lent Lilies	3/6 per 1000.
Snowdrops	5/6 & 7/6 per 1000.
Strawberry Plants	1/6 per 100.

SEND FOR LISTS BEFORE
ORDERING ELSEWHERE.

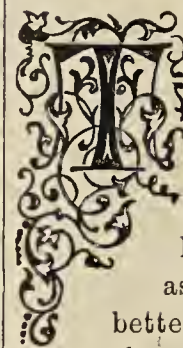
Cross & Son, Wisbech.



Journal of Horticulture.

THURSDAY, DECEMBER 24, 1903.

Christmas Gifts.



THE year will soon have run its course, and as it passes into the mists of the mighty past the dawn of a new era will rise before us, and the fervent hope of millions of Britons must assuredly be that the new will be better than the old. It is well that the close of the year brings with it the joyous season of Christmas, when the interchange of gifts and kindly greetings does much toward softening the sternness of life's struggle, and thus creates a reserve of mutual goodwill with which to begin another year. There is usually not much difficulty in deciding as to the most suitable form of gifts to the needy, as some of the many necessities of life are doubly welcomed in the depth of winter, and I for one should not like to see the number of such gifts curtailed; rather would I rejoice to see them greatly increased. Christmas gifts are, however, freely exchanged between friends and relations who fortunately are not in need of any of the real necessities of life, and thousands under such circumstances must often have been sorely puzzled as to "what to give." Let me ask them in such instances to remember the word "garden" and the multitude of good things from it, and for it, which would gladden the hearts of hosts of individuals who are interested in gardening, or if not so already, might be the means of bringing them into the fold. Something which will live and grow and last for years, forms one of the best of all mementoes of favourite individuals or of special times.

To those who have a garden and delight in Roses what a feast of pleasure will be associated with the receipt of a dozen or two of Rose trees, including old favourites as well as some of the newest gems. A favourite flower associated

READERS are requested to send notices of Gardening Appointments or Notes of Horticultural Interest, intimations of Meetings, Queries, and all Articles for Publication, officially to "THE EDITOR," at 12, Mitre Court Chambers, Fleet Street, London, E.C., and to no other person and to no other address.

with the name of a favourite individual is doubly prized. Do not then forget the Roses when gifts are being ordered. Some, again, will need to think of elders who have advanced far on life's journey, and are able to spend much of their time in that finest of all recreations—gardening. The flowers of their youth will probably appeal to such. Some good corms of double and single French Anemones would, perhaps, find special favour in instances of this kind; and do not forget to include a few of the St. Brigid type, which are queens among Anemones to-day. Some of the best strains of Primroses and Polyanthus might, in some cases, be substituted, and the charms of the Ranunculus should not be overlooked.

Among the herbaceous plants there is a wealth of material to select from, and an excellent collection could be obtained from prominent growers which would provide a succession of flowers during nine months of the year. Among this section the brilliant beauty of the Pæonies, Iris, New Michaelmas Daisies, Pyrethrums, Chrysanthemums, Hepaticas, and Delphiniums should not be overlooked. In fact among hardy perennial plants alone thousands might find an easy solution of their present puzzle as to what to give.

An enthusiastic Chrysanthemum grower might receive a pleasant surprise in the shape of some noted speciality—"Latest set;" and a dozen packets of seeds of the very best varieties of Sweet Pea would set many an individual longing for summer time, let us hope not to the extent of being in too great a hurry to sow the seeds.

The Christmas tree, the well grown pot plant in the shape of either a Palm, Erica, Solanum, or Fern, are mementoes often sent round at the festive season, so I need not dilate upon their merits, but will pass on to things which have utility as well as beauty. It is certainly not necessary to say anything to add to the craze for certain varieties of the "noble tuber." Those who mean to have Northern Stars will take steps to secure them independent of surprises which Christmas may bring, and it seems difficult even by the aid of a "long purse" to secure "Eldorado." Let us therefore pass on to fruit trees. I can imagine no more useful or acceptable gift to the owner of a garden than a few good Apple and Pear trees. If for planting on grass of course standards, but if for the garden proper Apples on the Broad-leaved Paradise stock, and Pears on the Quince, so that it may not be a question of waiting years for fruit. Here are a few excellent varieties for the purpose:—Apples, dessert: Lady Sudeley, Quarrenden, Cox's Orange Pippin, King of Pippins, Allington Pippin, Scarlet Nonpareil, and Charles Ross. Cooking: Early Victoria, Stirling Castle, Golden Spire, Warner's King, Bismarck, Newton Wonder, Lane's Prince Albert, and Annie Elizabeth. Pears: Souvenir du Congrès, Marguerite Marrillat, Marie Louise D'Uccle, and Doyenné du Comice.

The children should not be forgotten, as it is well to get them interested in Nature's handiwork: and if in addition to their usual gifts they receive a few plants or seeds for spring sowing, the delights of gardening will grow upon them as they advance in age. The value of suitable books on gardening should not be overlooked, for to either old or young such will invariably prove a source of delight as well as of valuable instruction, and it would certainly be difficult to estimate the mighty part which books have played in creating and maintaining the keenest interest in our ancient art. May that interest increase still more as time goes on, so that every individual will be led to look upon their life as being incomplete unless some form of gardening enters into it either as a recreation or a daily calling. We can all do something through the medium of Christmas gifts to spread the spirit of gardening abroad, and the blessings it brings in its train.—ONWARD.

Question Night.

It has been customary with secretaries and committees of gardeners' mutual improvement societies in preparing their sessional syllabuses of essays and lectures, to fill up odd occasions with a Question Night. Again, hard pressed secretaries whose dates of meetings are more numerous than the contributors of papers, have perforce to make the Question Night a stop-gap. We would be inclined to set aside half the meetings of the session of almost the best mutual improvement societies for open nights, to be entirely devoted to questions and impromptu discussions. There are scores of doubts in all men's minds, and

gardeners, both old and young, have abundant doubts and difficulties that continually arise. What more fraternal, what more helpful, what more inspiring to the anxious practitioner, than to put a question to an assembled body of his fellows and obtain the benefit of their varied experiences? True, there may be so many and divers opinions that a fresh difficulty would arise as to who was right, or whom to follow; but a logical mind could be trusted to resolve the leading facts.

There is another aspect of the Question Night, for out-of-the-way queries are very frequently put to the company, and are indifferently answered as a matter of course. But their usefulness may ultimately double itself if those to whom it was addressed will investigate its application in the quietness of their own homes or gardens, or by a diligent search in books of reference wherever these are accessible. Could there not be periodic debates on matters of moment? For example: The Proposed National Potato Society; the Proposed National Gardeners' Association; the Future of Market Gardening and Fruit Growing in the British Isles, and many similar topics would furnish matter for discussions of absorbing interest and of considerable utility.

The methods adopted at Question Night are simple. Each member should go prepared with a question. This he writes on a slip of paper, to be handed to the chairman or secretary. The slips are placed in a box, or hat, and passed round, each man taking out a paper, which he must try to satisfactorily answer, or can call upon someone else to assist him if it is out of his range of experience. An alternative plan is for the chairman to read the queries, and anyone present may respond. But the first method is the best.

The "Daffodil King" on Tour.—No. 11.

(Continued from page 213.)

Mr. Peter Barr is again on the point of making a tour, this time to Egypt, Palestine, and Greece, and he has requested us to conclude, if possible, the notes we still possess from the interviews enjoyed with him after his return from the long tour which this series very briefly describes. It may be remembered that the last instalment dealt with the conclusion of his visit to New Zealand, and his entry into Tasmania. Having arrived at Launceston, and been "taken in hand" by the Daffodil amateurs, Mr. Barr worked down the west coast of Tasmania. This part, in the early days of settlement, provided Melbourne with Potatoes; but the industry is now almost nil, Tasmania being thickly populated, and Melbourne being able to supply its own needs in this direction.

The west coast region is remarkable for its heavy rainfall, though our traveller enjoyed most charming weather, which he ascribes to his usual good fortune. Mr. Barr visited copper mines here, and from Hobart made an excursion to the fruit growing districts, which supply England with those handsome Apples we see during spring and early summer. He also journeyed to the old convict station, but previously equipped himself by reading as much as possible of the literature pertaining to the terrible times when criminals were put in durance vile. Many a good man was turned into the vilest of the vile, and it was no uncommon thing for an escaped prisoner to turn cannibal. It is from this part that the timber is, or has been, cut down for the making of the new Dover pier and harbour.

Returning, Mr. Barr took the east coast route, which is full of interest from its coal and tin mines, and—its Tree Ferns. The itinerant stayed at various centres to inspect the works, then joined the railway back to Launceston.

His next move was one of even greater interest still: certainly more romantic. This move was to Fiji, Samoa, and Tonga, by the New Zealand Steamship Company. The boat was charming, the food was good, and the officers all fine, gentlemanly men. If we survey a map of the Southern hemisphere, we will find these islands lying far out in the Pacific Ocean, under the scorching tropical sun. The Fiji group lie, roughly, 1,500 miles east of Queensland (Australia), which Mr. Barr also touched, and about 1,000 miles north of New Zealand, and the same distance south of the Equator. The Samoan group are 1,500 miles due north from the nearest point of New Zealand, being therefore near the Equator, and are fully 2,000 miles from Queensland. These distances will give the reader a better understanding of this latest voyage of Mr. Barr's tour. The Fiji Islands are a group mainly of volcanic origin, their total area being less than a third of that of Tasmania. The islands were ceded to Britain by their native King in 1874, and now form a British Crown Colony. In passing, one may observe that many Europeans voyage here for health's sake, and Mr. McIntyre, head gardener to Sir Charles and Lady Tennant, of The Glen, Innerleithen, Peebles-shire, N.B., was in this region recently, but returned some time ago.

The chief industry is the growth of the Sugar Cane, and the extraction of the saccharine juice, the plantations being worked by coolies brought from Indian territory. The home Government have several sailing vessels going back and forward between Bombay and Calcutta, bringing new apprentices and returning time-expired men. These coolies are well looked after, as each plantation has to find suitable housing. A regulated dietary is enforced, and a doctor attends. Each coolie is apprenticed for five years. At the termination of that time they can put in another five years as free men, and at the end of ten years they are returned, if they so desire. Each coolie costs the planter £35 to bring over. Many of these coolies prefer to remain on the island, and some of those who go away come back again, "so that," added Mr. Barr, "there is a danger of Fiji becoming a coolie settlement."

Tea of superior quality is cultivated on an island off Lavouka by a Mr. Robbie, a Scotsman, who is also a shipping agent, and there is at the new capital a botanic garden recently established by the former Governor, Mr. Thurston; but the situation, Mr. Barr thinks, was badly chosen. Trees can only be grown on raised banks, owing to the level ground being within two feet of salt under-water. Mr. Barr communicated with the Director of the Royal Gardens at Kew, who replied that he had placed the matter in the hands of the proper authorities, and that there was likely to be a change. It reflects with discredit on a Governor who cared only for Roses for his own table, and who denied the curator the freedom to make exchanges of plants and seeds with other stations and botanical gardens. It also points to extreme ignorance on his part of the primary duties of his office.

While at the Fiji botanic garden Mr. Barr saw many variegated Coleuses, and the curator informed him that all had been collected wild from the "bush." The veteran asks whether it be possible that Mr. Bause might not have had a packet of seeds from Fiji as a starting point?

The islands are very interesting, and all the merchants seemed to be doing well. Mr. Barr mentions having seen numbers of natives intoxicated in one of the refreshment houses, through drinking a native preparation. Lavouka, the ancient capital, is a busy little place.

Samoa is a German settlement, but it did not appear that the Germans were particularly prosperous. Here Mr. Barr visited R. L. Stevenson's tomb, which was in perfect preservation, and likely to remain so for thousands of years, provided that relic hunters left it intact. Our traveller had read in a Scottish paper that the tomb was neglected by the natives, and was going to ruin, but this was absolutely untrue. "If Stevenson's friends and admirers desire to do something," said Mr. Barr, "let them put a rail around the tomb."

Samoa is a great centre for Cocoa-nut Palms, and the unripe fruits yield a cool refreshing drink. When sufficiently young the meat has not formed in the nut. A little native boy climbed up one of the trees like a monkey, and threw down the nuts.

In Tonga Mr. Barr made an effort to interview the King, but the latter was somewhat shy, though he promised an interview. Later on, however, he sent to say that he was so much occupied with business that he regretted he could not see the itinerant. The messenger assured Mr. Barr that the King was a very hard-worked man, and that the concerns of state occupied much time and thought. Mr. Barr also had the opportunity to visit several adjacent islands in a steamer engaged in collecting copra, which is the dried Cocoa-nut. This is sent to Europe to be used in confectionery, biscuit manufacture, and also is used in high-class soaps. From here Mr. Barr returned by way of New Zealand to Sydney.

The next tour was in a different class of steamer—the type employed for conveying missionaries and their goods back and fro among the islands. Lord Howe's Island was the first place of call, and here a magistrate was put off, who periodically sojourns among the natives to deal justice in cases of dispute. At the port, here, there was the beginnings of a fish-drying establishment. The sea running somewhat heavy, the passengers were not allowed to land, and so the ship made for Norfolk Island, the home of the Pine of that name, or, botanically, *Araucaria excelsa*. Here the party remained for some hours—sufficient time to cross the island and view the old convict establishment. On the walls of many of the old cells there were the names of the bygone prisoners, written, doubtless, by themselves. After removing the prisoners from there, the island was allotted to the families of the mutineers from the Bounty, who started business by sheep rearing; but they soon grew dissatisfied with this, and now there is scarcely a sheep on Norfolk Island. The Church of England has a missionary college here, for training native preachers, who also are sent to Banks Island. The *Araucaria* already mentioned is very abundant, and some handsome specimens are to be seen, but other trees of the same species in Australia and even South Africa, according to Mr. Barr, will compare favourably with the indigenous representatives.

(To be continued.)

Novelties, or Improvements in Flowers.

The perusal of some of the beautifully got up and handsomely illustrated seed catalogues which one usually receives at this season, has reminded me of a morning in July last. Having come to judge the Roses at a certain annual flower show, I had an hour or so to wait for the appointed time, and between some showers wandered with permission into a good-sized field adjoining the show ground, which was being used as a seedground for flowers, many of which were of more or less new strains or varieties.

Among these I strolled as a complete outsider, with, in many cases, as much ignorance of the "manners and customs" of the plants I saw as "the man in the street," and yet I hope with that feeling of the general principles of beauty which can hardly be absent from one who *does* know a little about some flowers. The thing that struck me was that if a flower was novel, with any variation from the type, it was preserved and propagated and cherished without any thought as to whether the variation was an improvement or not.

Of course, it may well have been that the final selection as to whether the novelty was an improvement or not had not yet taken place, and was waiting for expert decision as to whether it was worth sending out, &c. And, again, I am so ignorant in the matter that many of the things I thought novel were very likely nothing of the sort, but comparatively well known.

However, I think many will agree with me that a novelty is very often sent out because it is a novelty, without much thought as to whether it is an advance in beauty on the type; and, though I took no notes, I can remember the thoughts which struck me as to three or four of the flowers I saw.

A white double *Campanula* with the "bell" entirely filled up with an irregular mass of half-formed white petals; it was a bell no longer, but solid, and a microscopical fairy could not have got inside it. Surely this was emphatically a variation for the worse, and not for the better.

Summer or annual *Chrysanthemums*, double, or rather semi-double, the "eye" completely spoiled by some of the stamens being half formed into petals, were there. Those I saw were neither one thing nor the other; neither double nor single, the characteristic beauty of either a double or single flower being entirely absent. For perfection, more is required of a double flower than a single; but a single must maintain the beauty of its "eye," as well as of its petals, or its glory is lost.

Then I remember to have noticed a large quantity of *Candytuft*, a flower that seems to have been improved but little compared with many others. It was of the ordinary lilac colour, paler towards the centre, which may be, for all that I know, the usual habit. It seems to me to give an impression of weakness; the centre of a flower, to my idea, should always be its strongest point, whether double or single. I look upon the centre of a Rose as far more important than the outline of the outside petals, just as I should dwell more on my lady's face, and especially on her eyes, than on the edges of her skirts. The petals of a flower direct our sight, as they are intended to guide insects, to the centre; and that centre or eye should be, I think, as in *Hibiscus*, of more intense colour than the rest of the flower. It generally is so, and where, as in the case of this *Candytuft*, the centre is a weaker shade of the same colour, an impression of weakness and poorness is given to me.

Next I remember some *Antirrhinums* that for dwarfness of habit appeared to have got to the furthest possible limit. I suppose these are the "Tom Thumb" varieties. Well, "General Tom Thumb" (I remember him) was a "monster," i.e., a malformed creature, contrary to Nature, and to my mind the intermediate forms of *Antirrhinum* are quite dwarf enough; but perhaps this would be more a matter of individual taste than the other examples I have mentioned.

Mignonette, too, I remember, so gigantic in spike that the foliage looked unnaturally out of proportion. And in this case the beauty of the spike itself seemed to be lost because of its size, for in medium development not more than two or three rows of florets in the centre of the spike were in flower, those above them being in bud, and those below them in seed, and thus the whole spike was never in full and perfect beauty. Moreover, have not those large spiked strains suffered from want of scent?

These are criticisms from one who is confessedly ignorant of annuals and perennials beyond the knowledge which comes from a general love of flowers; and are only meant to warn those who are equally uninformed that novelties are not necessarily improvements.—W. R. RAILLEM.

AN IMPORTERS' NATIONAL ASSOCIATION.—A movement is on foot in the U.S.A. to organise an Importers' National Association, the object of which is to intervene for the protection of its individual members from injustice, to prevent undervaluations, and to establish the proper rates of duty on imported merchandise, &c.



Cypripedium × Arthurianum pulchellum.

Cypripedium Arthurianum resulted from a cross between *C. insigne* and *C. Fairrieianum*. It is fairly well known, and is a good grower. The petals are pale green faintly spotted with purple in the lower half, veined with deep crimson in the upper half, and turned downwards like *C. Fairrieianum*. The dorsal sepal is pale yellowish green, broadly margined with white on the upper part, veined with blackish crimson. The lip is veined and mottled with brown on a pale greenish yellow ground. The flowers appear in the autumn months and continue a long time in perfection. *C. Arthurianum pulchellum* is much superior to the preceding, having a broader dorsal sepal, which is covered with larger spots, and is richer and deeper in colour. The former was first shown on October 10, 1882, and the latter (J. Veitch and Sons, Limited) November 1, 1892.

Masdevallias.

There is probably no more interesting or fascinating genus of Orchids in cultivation than *Masdevallias*, and certainly no other contains such a wondrous variety of form or beautiful combinations of colouring.

The lover of the grotesque will delight in such exquisite little gems as *M. Estradæ* and *M. trochilus*, or the wonderful *M. Chimæra*, while those who look for brilliant colour and simple form will find ample to please them among the *Harryana* and *Lindeni* section. *Masdevallias* as a genus are not difficult to cultivate, but they show the results of indifferent treatment sooner than many others. For instance, an *Odontoglossum*, or even a *Cattleya*, may not have a sound root in the pot in which it is growing, and yet an inexperienced person would not for a time detect anything wrong by the appearance of the pseudo-bulbs or leaves, because the stored-up nutriment in the former keeps the plant going for a time without much assistance from the roots, and may perhaps produce a few flowers. *Masdevallias*, on the other hand, if once the roots get in a bad way, show the effect almost at once, as they have no pseudo-bulbs to sustain them, and are naturally more sensitive to atmospheric changes.

The roots then, and how to conserve them, must be the grower's first care. Anyone who has had a little experience with Orchids will have noticed how these delight in rambling about over the hard, porous surface of the pots where they are fully exposed, often quite dry, and have nothing of a close nature about them. Here then is the cue for root preservation, and in preparing the compost for these beautiful plants growers must keep in mind the necessity of providing for a constant supply of air to the roots, at the same time checking too rapid evaporation, and providing the necessary nutriment. The plants must not be dried at the roots at any season, but no stagnant moisture must be allowed to collect about them. They all thrive in a cool house during the summer, and must have a light airy position shaded from bright sunshine.

The winter temperature must not be allowed to fall much below 50° for the *Chimæra* group, while 45° is quite low enough for the *Harryana* and *Veitchi* sections, and in fact for any cool house Orchid. The chief insect enemy to *Masdevallias* is the yellow thrip, and unless constant war is waged against these they soon get the upper hand, ruining the appearance of foliage and flowers. *M. amabilis*, *M. Harryana*, *M. Chelsoni*, *M. Veitchi*, *M. ignea*, *M. coccinea*, and *M. Lindeni* will be found a good selection of the showy flowered types. These are natives of Peru and New Granada except *Chelsoni*, which is a hybrid raised by Messrs. Veitch & Sons from *M. Veitchi* and *M. amabilis*. *M. tovarensis* is the only well-known white flowering kind.

M. Chimæra, *M. Backhouseana*, *M. Bella*, and *M. Wallisi* are amongst the most marvellous productions of the whole Orchid family, and I hope to refer to the culture of these more fully in the near future. Of the small flowered section *M. triaristella* and *M. triangularis*, as well as those named above, are free flowering, elegant, and very interesting species.—BRISTOL GROWER.

Sophronitis grandiflora.

Few plants are so charming during the dull winter days as the *Sophronitis*, especially this fine species. It produces flowers of immense size when compared with that of its pseudo-bulbs, and this, too, with great freedom. The individual flowers are upwards of 2in across, of a glowing scarlet, and thriving as it does in quite a cool house, it is an excellent plant for all classes of growers. Like all dwarf Orchids it dislikes a large amount of compost about its roots, but likes a thin, well drained, firm medium that will keep in good condition for several years without disturbance.

Small pans suspended near the roof of the *Odontoglossum* house or a house kept a trifle warmer are suitable for this and its variety *purpurea*, but the dwarfer tufted sort, *S. cernua*,

thrives well on a lightly dressed rough wooden block. *S. violacea* is more difficult to grow than either, the best plants I have had being grown on a piece of Tree Fern stem. It is less tufted than either of the others, and not so showy. *S. cernua* is the oldest species, having been in cultivation since 1826, the others having been introduced at a later date from various stations in Brazil.—GROWER, Bristol.

Orchids at Chelsea.

Messrs. James Veitch and Sons, Limited, of the Royal Exotic Nursery, Chelsea, recently had a very rich display of Orchids in flower. The dense fog of two weeks back must have scorched and destroyed hundreds of the tenderer blossoms, yet more have opened and are still opening. It was surprising to learn that such large quantities of certain species are grown. Thus of *Cattleya labiata*, some 700 plants are cultivated; *C. Mendeli*, 400; *C. Trianae*, 500; *C. Mossiæ*, 500; and *C. Schröderæ*, 500. All of these are flowering well, or ready to unfold. The plants are healthy, with green coriaceous leaves and fresh, plump white roots. *Lælia purpurata* was represented by a large collection of specimen plants in 10-inch pots, each plant having four or five leads.

Dendrobium Wardianum hangs from the roof of a warm Lily house, in small pans, and the stock of *D. nobile* was also large and highly satisfactory. *C. Bowringiana*, whose flowers are so useful for breast bouquets, was in fine condition, and of course *Oncidium Forbesi*, *O. tigrinum*, and *O. crinitiorhynchum* were in full beauty of blossom. *Cattleya Dowiana* in hanging pots, and *C. D. aurea* in large pots well up to the light, were objects of envious interest. *Vanda cærulea*, the "true blue," is always worthy of attention.

There were some attractive new hybrid *Cypripediums* in the smaller pits. *C. x Little Gem* was one. It resulted from crossing *C. Harrisianum superbum* with *C. x Baron Schröder*. The dorsal sepal is bold and fine, flushed a blush-purple, and edged white. The petals droop a little; the pouch is rosy.

C. x Catherine came from *callosum Sanderæ* and *superbiens* (syn. *Veitchi*), pale creamy ground, the delicate petals and sepals spotted with dark red. It is a very graceful and sweet little flower.

C. x Memnon from *C. Spiceranum* and *Charlesworthi* shows the trace of both parents, but the latter predominates. It has a pretty rose-mauve dorsal sepal, with a deep greenish-brown base, and a brown pouch. The *Leeanum* varieties were particularly sturdy.

Cultural Notes: Saccolabiums, Dendrobiums, Yandas.

Saccolabium giganteum and its varieties are now in flower or approaching it, and the elegant spikes are very welcome. It is not one of the best of growers, though for a few years after importation it gets along fairly well, and it is not wise to allow the spikes to remain on too long. The fact of their appearance at the dead of winter is against the health of the plants, and frequently leads to a shrivelled state of the leaves from which they recover slowly and with difficulty. A moderately dry state at the roots and in the atmosphere is necessary now to induce rest until the spring, when the conditions for growth will be more suitable.

Among other *Dendrobiums* advancing for flower will be the quaint Australian species *D. speciosum* and *D. Hilli*, and though very often the pseudo-bulbs of these will often be considerably shrivelled owing to the drying in autumn, it is not well to overwater them yet. There will be ample time later to put all this right. Should signs of new roots appear as they occasionally do, a little surface dressing may be given; but the plants must not be disturbed at the roots. The variety *Bancroftianum* is a more slender grower, but a very charming plant. It usually flowers later than the type, and from now until the spikes show plainly must be kept dry.

Drip is a source of much danger to Orchids at all times, and especially now when the inside temperature is so much higher than the outside. Basket plants suspended from hooks screwed into the rafters are almost sure to suffer, as the hook and wire carry the drip direct to the centre of the plant. In all cases it is better to have a light iron or brass rod running the whole length of the house for suspending baskets from. These can then be hung between the rafters, when, of course, the risk is much less. *Cattleyas* and other kinds that form cup-like growths must be frequently examined now and turned upside down to allow any water that has gathered to escape.

Vanda Amesiana as it goes out of flower may, if necessary, be top-dressed with a little sphagnum and crocks, but any plants that require a new basket must not be pulled about yet, as there would be considerable risk of their not re-establishing themselves. When grown too cool the stems of this pretty species are apt to decay just above the surface line of the compost, and when this occurs the plants should be shaken quite clear of the pot or basket and replaced a little lower, using only clean crocks. More warmth should then be allowed, and the plants treated like newly imported specimens.—H. R. R.

Old-Time Gardening.

(Continued from page 346.)

In an early paper of this series, the part played by "adventurers" and merchants in the reign of Elizabeth in the introduction of exotics into England has been noted, and, as a corollary to that, mention may now be made of what occurred in this connection in the century succeeding. The most notable of the early introducers of new plants were undoubtedly the Tradescants, father and son, the former of whom is supposed to have been the son of a Dutchman of that name who settled in England in the latter part of the 16th century. They were held in much esteem in England, and so late as 1709 we find Steele in "The Tatler" making reference to John Tradescant as a collector of curiosities.

If we are to credit Hawkins ("Walton's Complete Angler"), the first Tradescant was gardener to Queen Elizabeth, and the one now known as the "Elder Tradescant" was also employed in a like capacity by that Sovereign. Parkinson relates how he made journeys on the Continent in search of rarities in the vegetable kingdom, and while with the Earl of Salisbury he left an account of what he bought, with prices, on a journey of this nature in 1611. He made purchases at Leiden, at Haarlem, and at Parrys. "An exceeding great Cherye called the Boores Cherye" cost 12s.; "The double Echatega (?), the martagon pomponne blanche (Lilium Martagon album), the martagon pompong orang collar (Lilium pomponium), and the Irys calcedonye and the Irys susyana (Iris pallida and I. susiana)" cost £2; "Vynes called Muscats, two bundals of plants, 4s."; and "8 pots of Orang trees of on year's growth, grafted, at 10s. the piece," are examples of his purchases at this time.

In 1620 he made a journey to Algiers, and gathered much spoil on that occasion. Of *Gladiolus byantinus*, as he informed Parkinson, he saw acres growing in Barbary, and from Algiers he brought several sorts of Apricots. He travelled also in Turkey and Russia, and in a nursery he established at Lambeth—but previous to which he was gardener to Lord Wotton at Canterbury, by whom "Finocchio" was first introduced, and perhaps while he was gardener to the Duke of Buckingham—he had a very complete collection of Plums, many of which he had introduced from abroad. He also introduced to cultivation in England the beautiful *Pyrus Aria*, a tree not nearly so much planted as its merits entitle it to be.

The introduction of *Tradescantia virginica* has generally been attributed to either the father or son. As a fact, the elder Tradescant, as we gather from Parkinson, was presented with it by a person who brought it from Virginia for a kind of *Asclepias*; yet it is more generally known than any other of his own introductions, and long after his day was called by his name. As to *Aster Tradescanti*, it is first mentioned by Johnstone in 1633 as growing in the "gardens of Mr. Tradescant, Mr. Tuggye, and others," and "reported to be a Virginian."

From this authority we gather that Tradescant was a large grower of Auriculas, and had also *Aristolochia serpentaria*, *Pelargonium triste*, *Spiraea Aruncus*, *Scolymus maculatus*, *Trifolium rubens* ("from Fermentera"). *Phaseolus multiflorus* "was procured by Mr. Tradescant, and growes in our gardens, is a large plant, not differing in manner of growth from—Kidney Beanes, but his floures are large, many, and of an elegant scarlet colour, whence it is vulgarly termed by our Flourists, the Scarlet Beane." *Jasminum fruticans*, *Laburnum*, *Anagris fœtida*, Horse Chestnut (then rare), and Oriental Plane are other plants he grew. His son, who visited Virginia in pursuit of plants and curiosities, gives in "Museum Tradescantianum" a list of plants and fruits cultivated in his garden. The museum itself was bequeathed to Ashmole, who, in turn, left it to the University of Oxford, and has been long known as the Ashmolean Museum.

Early in the 17th century, voyages were made to China, Japan, India, Sumatra, and other eastern islands, and "factories" established; while at the same period the West Indies, the Bermudas, Jamaica, and new settlements in North America were regularly traded with. It was, of course, impossible to acclimatise tropical plants in England at this period, because the hothouse was still a thing of the future, though some were wintered in cellars; but in the good lists of common garden flowers noted by Evelyn in 1664, it is not without interest to find such as *Podophyllum peltatum*, *Lobelia cardinalis*, *Passiflora cærulea*, *Asclepias virginica*, Marvel of Peru, Persian Lilac, common Lilac, *Jasminum grandiflorum*, *J. odoratissimum*, *Canna indica*, *Cyclamen persicum*, *Datura fastuosa*, *D. metel*,

D. tatula, *Eryngium planum*, *E. alpinum*, *E. amethystinum*, *Eupatorium ageratoides*, *Mimosa pudica*, *M. sensitiva*, *Lychnis Viscaria* var., *Scabiosa atro-purpurea* vars., *Cineraria ragusina*, *Yucca gloriosa*, *Agave americana*, *Nerine sarniensis*, *Brunsvigia multiflora*, *Argemone mexicana*, *Spiraea salicifolia*, and altogether, at a rough count, there would be 400 plants, with varieties, in cultivation.

The varieties of fruits cultivated were also greatly increased, in Pears especially, a very great influx of French varieties occurring about this time, a selection of these continuing to be cultivated till about a hundred years ago. At this period too, a few Apples of French or Flemish origin were introduced. Hartlib edited "The Legacy," the product of several writers, and another work on fruit trees, from which we gather that 500 varieties of Apples were thought to have been in cultivation at the time of the Commonwealth. In the last-named work, one of the writers quaintly remarks:

The poor man's child invited was to dine,
With flesh of oxen, sheep, and fatted swine.
(Far better cheer than he at home could find),
And yet this child to stay had little minde.
"You have," quoth he "no Apple, froise, nor pie,
Stew'd Pears; with bread and milk, and Walnuts by."

This is one of those remarkable sayings that cast a much-needed light on the domestic economy of the poor, about the



Cypripedium Arthurianum pulchellum.

life of whom scarcely anything occurs in old histories. An equally interesting statement was made a few years later by Worlidge to the effect that fruit trees in the South of England were largely planted in hedgerows in exactly the same manner that Damsons are grown in parts of Cheshire to-day.

The Continental wars had, no doubt, ultimately a good effect on gardening in England, and the custom of young men of family spending a few years in travel on the Continent would contribute materially to its advancement. A perusal of the early part of "Evelyn's Diary" makes this abundantly clear, and the tastes he acquired during his travels were not once lost during the whole course of his lengthened life. Sir W. Temple affords another instance of an Englishman enriching his gardens with many foreign introductions, and at the same time introducing improved methods of cultivation, the result of careful observation while acting as Ambassador at various foreign courts, and before him, Sir H. Wotton may be cited as another instance.

We gather from Switzer, that Lord Capel enriched his garden at Kew with many French fruits, and the same writer commends very highly the labours of Lord William Russell, whose character as given in Bishop Burnett's History of His Own Times exhibits a sweet-tempered yet witty gentleman

as a great encourager of gardening. Compton, made Bishop of London in 1676, had served as a soldier, but became the greatest patron of gardening of that age, having as many as a thousand species of exotics in his "Stoves and Gardens." Gardening formed a relaxation from the pressing duties of his exalted office, and he had a constant supply of new plants forwarded by correspondents travelling abroad.

But, it is very clear that England was greatly indebted to the Dutch for many novelties, for, while they, by every means, endeavoured to hinder the English from colonising abroad, or if that failed, to oust them from their factories, the Dutchman was by no means selfish in retaining what his neighbour, in return for a consideration, was anxious to obtain. It was in this way, no doubt, that the earliest Cape plants reached Evelyn and others, and as a fact both French and Dutch traders made annual trips to England with their wares, which they appear to have brought with them and travelled about the country disposing to their patrons. Bonâ fide English introductions were very largely confined to America, with which, once a colony had been established, there seems to have been a fairly constant communication, and as early as 1634 we have an instance where a Mr. Gibb, of Bath, is mentioned as a cultivator of exotics, many of which, he himself had brought from Virginia. The Public Botanic Garden as distinct from the private physic gardens already established in the sixteenth century, had its beginning in that under review, and became the repository of collections of plants that would otherwise have been lost as well as affording a home for novelties of all kinds, but that and other matter must be left over meanwhile.—B.

Forestry.

Cutting Trees by Electricity.

It is reported in the German press that successful experiments have been made in various forests of France in cutting trees by means of electricity. A platinum wire is heated to a white heat by an electric current and used like a saw. In this manner the tree is felled much easier and quicker than in the old way; no sawdust is produced, and the slight carbonization caused by the hot wire acts as preservative of the wood. The new method is said to require only one-eighth of the time consumed by the old sawing process.

Forestry at Park Royal.

The Royal Agricultural Society, it is stated, have decided to hold a British forestry exhibition in connection with the Society's annual show of 1904, which will be opened on the 21st of next June. It is proposed that the exhibits shall be classified in the following seven sections:—(1) Seeds and cones of forest trees; (2) seedling trees and transplant, showing the effects of nursery treatment as to cultivation, manuring, root-pruning, &c.; (3) woods and plantations; (4) timbers, including hand specimens of home-grown woods of various species; (5) insects and diseases, showing characteristic examples of the attacks of game, birds, squirrels, voles, &c.; (6) plans, maps, models, &c., illustrating working plans, forest exploitation, manipulation of timber, &c.; and (7) forest and nursery tools, instruments, and appliances. Specimens of exotic timbers that cannot be produced in this country will not be shown, but foreign-grown specimens, to be placed alongside home-grown materials, will be accepted. Lord Granby is the chairman of the Exhibition Committee, and the principal institutions in this country engaged in the promotion of scientific forestry, owners of forest and woodland areas in Great Britain, and others, are invited to lend their active co-operation in the endeavour to make the exhibition complete and thoroughly representative of British forestry.

Prairie Tree Planting.

George L. Clothier, at the summer meeting of the American Forestry Association at Minneapolis, said: "Tree planting on the Minnesota prairies has not been as successful in the past as it should have been, because inferior species were largely used. Nurserymen have foisted such worthless shrubs as Diamond Willow upon the public for a fence post tree. Cottonwood, Box Elder, and Silver Maple have been planted on upland sites, ill adapted to the growth of these river bottom trees. Little care has been used in the selection of sites for plantations, and the proper adjustment of the forest plantation to the needs of the rest of the farm has been overlooked. Trees have been planted too close to the dwellings, thus causing snowdrifts to bury the buildings or impede the progress of the farm work. Every Minnesota plantation and farmstead should have an L-shaped protective belt on the north and west, known as a snow-break. To be of any value the snowbreak must be bordered on the south and east by an open space, ten or twelve rods wide, known as a snow trap, into which the drifting snow will collect."

NOTES

NOTICES

A Christmas Greeting.

Sincerely do we wish that all our readers and contributors may pass a happy Christmas-tide, and that the New Year may open and continue to be to them both a pleasant and prosperous one.

The Chrysanthemum Analysis.

The Journal's Chrysanthemum Analysis is being prepared by Mr. E. Molyneux, and will be published next week. This valuable contribution will thus be published in seasonable time for the execution of orders by the Chrysanthemum trade growers. The analysis will be on a broader basis than heretofore.

The "Gardeners' Assistant."

Among the resolutions made at the New Year (and we all make resolutions) should be this one: That whosoever does not possess the "Gardeners' Assistant"—which is the fullest and best guide for the practical gardener's study—make the resolve to take it out in parts, as is now being offered by the Gresham Publishing Company. The work is handsome, both outside and in; it has coloured plates and innumerable illustrations; it deals with all phases of gardening; was written by experts; and has just been brought up-to-date. For particulars, see our advertisement pages.

Extensions at Covent Garden Market.

Visitors who knew Covent Garden Market as it was only a year ago, on re-inspection now, will be able to observe a considerable addition to the buildings of the market area. During the past summer the large vegetable yard or square, which is looked down upon by the offices and shops in Tavistock Street, has been undermined for huge cellars and storage chambers, and overhead there has been reared a large and really ornamental building, quite beautiful indeed if we compare it with the R.H.S. Horticultural Hall! The lower storeys of this square-built edifice form an open shed which at the present moment is fully packed with Christmas evergreens, while above there is a roomy, light, and comfortable floral hall with booths around the walls and two rows back to back down the middle. Each booth or stall has its own private office, walled off. This hall is reached either from Tavistock Street or the upper part of the Market by broad flights of stairs, one from either side, these meeting at the entrance to the hall. The addition has been greatly needed for a long time, and every stall-space is already occupied. It was only opened a week or two ago.

Snaithing Brook, Sheffield.

Since our notes on Snaithing Brook appeared in the spring, the owner (H. H. Andrew, Esq.) has unfortunately passed away, having died suddenly while in New York. The gardens are very beautiful, and a credit to the gardener, Mr. Sharpe, who has quite a wealth of flowers for Christmas. An immense Bougainvillea glabra is still covered with bloom, a splendid batch of Cyclamens are in full flower; then there is a grand lot of Begonia x Baron (?) de Rothschild, which appears to be quite as free as, but with larger flowers and paler in colour than, Gloire de Lorraine. There are a few choice Orchids in flower, and others are now throwing flower spikes. Dendrobium primulinum giganteum has spikes fully a yard long, and showing well for flower. Coleus thyrsoides is also in flower here, the beautiful blue being a welcome addition at this season. There are also Roman Hyacinths and Narcissi, Azaleas and Poinsettias; also grand Primulas of Webbs' and Fisher, Son, and Sibray's strains. There is still a nice show of Chrysanthemums, and the establishment will apparently not be short of flowers or flowering plants for the Christmas season. There are some good Tomatoes and Grapes. The vineries are being prepared for starting. Cinerarias look promising, and there are a nice lot. Out of doors all is trim and neat, and it may be hoped that ere long something definite may be known as to the future of this beautiful seat.—W. L.

Annual Assembly of the Edinburgh Botanical Garden Staff.

The members of the staff of the Royal Botanic Gardens, Edinburgh, held their second annual assembly in the Free Gardeners' Institute, Picardy Place, on Friday evening the 18th inst. Dancing commenced shortly after 9 p.m., when about thirty-two couples took the floor. During the evening selections on the piano were given by Miss Sinclair, and songs by the Misses Forbes and Stewart, and Mr. McArthur, which were all highly appreciated by the company. The masters of ceremonies, Messrs. Wilson and Gow, are to be highly complimented for their success in providing such an enjoyable evening, which was brought to a close in the usual way about 4.30 a.m. —N. McK.

Croydon Horticultural Mutual Improvement Society.

The last of the series of lectures arranged for this year was given at the society's rooms, Sunflower Temperance Hotel, on Tuesday, December 15, when, before a good attendance of members, Mr. J. Gregory, of Croydon, in a very descriptive and interesting manner, delivered a lecture on "Some Gardens I have Visited," illustrating it with lantern slides prepared by him from photographs taken by himself from time to time during his long career. Truly many of them reflected great credit to his endeavours as a photographer and slide maker. Mr. Gregory was one of the chief promoters of this society, and his energies, displayed at all times for the well-being of this excellent institution, are widely known.

Covent Garden at the Christmas Season.

Covent Garden is a great sight just now. Christmas fruit, flowers, and vegetables are present in a variety and abundance truly marvellous in these grey days, when not a bright patch of garden is to be found on this side of the English Channel. I picked my way to-day between scores of carts and waggons heaped with Holly, Mistletoe, and undressed Christmas trees, and snatched short conversations with burly men wrestling with barrels of Canadian Apples, boxes of Mexican Oranges, and hampers of nuts and fancy fruits. I gathered that the comparative failure of English-grown fruit had been more than balanced by an exceptionally good year abroad, and that Apples especially will be found to be plentiful and cheap. Mistletoe made a bad start, but is now coming in in large quantities, but there is a pronounced shortage in Holly. Nuts, moist and dried, show a falling off. Dessert fruit, which is all grown under glass, is, on the other hand, excellent in both quality and quantity. I think I have never seen finer Grapes than can be purchased just now, in "the Garden." —(From "Sheffield Telegraph," December 18.)

The Proposed Gardeners' Association.

A largely attended meeting of gardeners was held at the rooms of the Horticultural Club, London, on Tuesday, December 15, to discuss the proposal which many of our readers have been debating in these columns. Mr. Owen Thomas, V.M.H., occupied the chair, and Alex. Dean acted as secretary. Mr. Dean read a large number of letters all in favour of the proposition, but neither these nor the speakers at the meeting added anything to what has been said in the "J. of H." The suggestion to make an examination compulsory, is what we ourselves have said ought to be made law. Surely if gardeners were sifted into classes 1, 2, 3, according to their attainments and proficiency, it would be a step in the right direction. The association would appoint adjudicators, and practical work would be part of the test. Dr. Brown in his book "The Forester" set out an examination scheme for foresters twenty years ago, and the proposals he made are being gradually brought into practice to-day. There ought to be classes or grades of gardeners. In every line of life professional men require to hold certain certificates given by recognised authoritative corporate bodies ere they can obtain any appointment. Are gardeners to be the exception? Here is a means for raising the general status of gardeners, and of deterring the unambitious, narrow-minded, and thoughtless probationers. The meeting ultimately appointed a small committee, consisting of Mr. O. Thomas as chairman, Mr. A. Dean as hon. secretary, and Messrs. W. H. Divers, J. Willard, Jaques, Norman, Kelf, Dixon, and Allen to prepare a scheme as a basis for discussion, and bring up the same at a February meeting.

The Suburban "Geranium."

Certain suburban florists are by customers at this time of the year commissioned to lift Geraniums from beds, pot them, and keep them through the winter. The average floriculturist does nothing of the kind. He takes note of the varieties and their numbers, and then flings the old plants on the rubbish-heap. Say in May he sends to the customer Geraniums of his own raising in full leaf and flower. He is profusely thanked for his supposed services by the delighted client, who willingly pays treble value for the fostering care that has been taken with the plants throughout six dreary months!

Value of a Holly Hedge near Newport, Mon.

The value of a Holly hedge is no trifling matter, as was shown in the action of Williams v. Lewis heard recently at Newport. Mr. John Williams, a Newport provision merchant, of 30, Chepstow Road, had purchased an agricultural property at Pontyminster for about £3,000, alongside a portion of which there was a Holly hedge 15ft to 16ft high, 10ft thick, and forty to fifty years old. It was cut down by the defendant, Mr. Lewis, a farmer, who had a house adjoining, against whom £35 damages was claimed. The Holly was useful in protecting the site (upon which there was a proposal to build a sanatorium) from the north and the north-east winds. The defence was that the tenant of a cottage and garden on the plaintiff's property was aggrieved by the state of the hedge, as it allowed sheep to get on her garden, and she asked Mr. Lewis, the farmer, to cut it down. His Honour in the result gave judgment for £25 and costs.

Orchard Planting in Gloucestershire.

Recently, under the auspices of the Gloucestershire County Council, a demonstration on the planting of an orchard was given in a field adjoining Red Hill House, Lydney, by Mr. W. Iggulden, of Frome, Somersetshire. The arrangements were made by Mr. H. A. Howman, Director of Agriculture for the county authority named. The planting took place in an acre of red loam soil, close to the residence of Mr. Bathurst, jun., and which forms part of the Bathurst estate. Some 200 trees (all Apples) were set. Of these fifty were half-standards, and 130 dwarfs. One way the lines were 24ft apart, the other way 12ft, and the standards and dwarfs were planted alternately, the idea being that twenty years hence, when the dwarfs shall have passed their prime, they may be thinned out, leaving the standards in possession of 24ft of space all round. Afterwards Mr. Iggulden gave a demonstration on the pruning, grafting, and treatment of trees generally, in an orchard adjoining Lydney Park.

Scholarships in Horticulture, University College, Reading.

Four scholarships to young gardeners will be awarded in January, 1904. Each scholarship is of the value of £45 (inclusive of maintenance and instruction). The student gardeners holding the scholarships will be required to attend, from January to September, a course of instruction in the Horticultural Department and the garden of University College, Reading. Candidates must be of not more than twenty-two years of age, and must have worked for four years in public or private gardens. Applications for scholarships must be made on the scholarship form to be obtained from the Registrar. This form of application, accompanied by a certificate of work and character, must be sent to the Registrar before January 10. Candidates will be required to pass a simple examination in English, arithmetic, and the elements of horticulture. In awarding the scholarships, previous training and experience will be taken into account. The course of training will consist in:—1, Practical horticulture; 2, theory of horticulture; 3, account keeping; 4, lectures and practical work in botany and chemistry in relation to horticulture, insect and fungoid pests, bee-keeping. The scientific instruction will be given in the laboratories of the college; the practical instruction in horticulture in the college garden. The garden, 7½ acres in extent, is well provided with horticultural buildings. It contains, besides a large number of pits and frames, thirteen glass houses used for general florist and market work. The scholarship holders will be prepared for the R.H.S. examination. Certificates of proficiency will be awarded on the work done during the course, and on the results of an examination held at the end of the course. Apply to the Registrar, University College, Reading.



Red Spider on Vines.

I quite agree with Mr. Jefferies as regards the fumigating of Muscat and Lady Downe's Vines with XL All, as to the utter impossibility of killing red spider without the total destruction of the foliage of the same—at least, my experience has been the same as Mr. Jefferies', and I am pleased to see the subject brought forward again, as it might be the means of causing some who have not tried it to be a little cautious before using it on these particular Vines. In the month of July I tried it in a house full of Muscats, with the exception of two Vines, one a Mrs. Pearson and the other Lady Hutt. The house is a lean-to, on the back wall of which are planted Peach trees, and at the time the Peaches were ripening and could not be syringed. Red spider began to make its appearance, and not wishing to let it get a hold on the Vines, I resolved (after being advised) to vapourise with XL All. The house was carefully measured, but not wanting to run any risks so early in the year, I used rather less liquid than the amount recommended, and glad I was that I did so, for on the second day after fumigating I could see the effects on the leaves of the Vines, though not to any great extent.

In the autumn the house was filled with Chrysanthemums on which were some green fly, and wishing to get rid of the fly, and at the same time try the effect of the nicotine on the Muscats, and not being so particular now, as the Vines were ripening their leaves, I again fumigated on two different nights; the first night a little under strength, but as a few green flies were alive the next day I fumigated again that night, according to the directions given. Next day, of course, the "flies" were all dead, the leaves of the Muscats pretty well burned up, and the red spider still living! I might mention that the foliage of Mrs. Pearson and Lady Hutt were not affected in the least.

Now, let it be understood that I by no means wish these few remarks to be a stumblingblock to the use of XL All; rather on the contrary. I can highly recommend it, having used it for a number of years, although never on Muscats or Lady Downe's, but in another vinery of mixed Grapes without any bad effects; also for Peach trees, foliage plants, &c., with grand results, to the total destruction of thrip and green fly, but not to the extermination of red spider.—JAMES DUFF, Threave Gardens, Castle Douglas, N.B.

The Raid Against Show Boards.

I have attended a good number of provincial Chrysanthemum shows, but the most artistic display was seen at the last Cardiff Show. This society boldly abolished their class for 24 "Japs," distinct, substituting a class for eight vases, each containing three blooms of one variety, and instead of flowers of one variety shown on boards, they had classes for five blooms of one variety shown with their own foliage in a vase. The experiment was a pronounced success from every point of view. The reason why vase classes have not been a success at some exhibitions arises, I have no doubt, from the ambiguous wording of the schedules, and the lack of proper knowledge on the part of the exhibitors as to the best method of staging. If good prize money is offered, exhibitors will be found willing to compete for it; and of this I am convinced, that instead of lessening the number, it will eventually have the opposite effect. For under the old system blooms that have been shown upon boards are useless after a show; whereas blooms that have been shown in vases may be taken home and utilised for house decoration. And what employer would not be proud of his gardener's handiwork if he were able to show to his friends the exhibit that had won the first prize, or even the challenge cup at some good show, and by so doing stimulate the spirit of rivalry amongst neighbours; thus ensuring better competition for another year? I have not seen the Edinburgh Show, but understand it is the most successful in the country, and evidently the experiment of abolishing boards has not spelt disaster in this case. More attention may be paid to blooms staged on show boards by gardeners and growers, but not by the general public; and it is the latter who chiefly sustain our shows by subscribing and paying the entrance charges. I think Mr. Dean's fears about the extinction of a large number of exhibitors are quite groundless.—A. H.

I was glad to see by the remarks of Mr. Richard Dean, page 534, that he is fully alive to the necessity of retaining show boards for exhibiting blooms of Chrysanthemums. I think there is room, and with advantage too, for vases and boards. Com-

petition would be less keen if show boards were abolished. I, too, think that the writers of the various articles against show boards little dream of the expense in providing, carting, packing, and storing vases, that societies would be put to if all blooms had to be shown in vases alone. Then, again, what huge boxes are required to take blooms, on long stems, to shows! To take three dozen blooms, it requires a box 5ft 6in long, 2ft 6in wide, and 2ft 3in in depth. "Small panttechnicons," one exhibitor aptly described his boxes! The cost is very great in getting to and from the shows with these huge boxes. There are excess fares to be paid, and "tipping" to be done at all stations. The Crystal Palace is a most awkward place to get at; at least, when one is loaded with these travelling boxes.

It was with feelings of dismay that I heard our president (Mr. C. E. Shea) announce that the Horticultural Hall, which is now being built, would be too small to hold the N.C.S. shows. Could not some of the leading gentlemen of the R.H.S. have approached Mr. Andrew Carnegie, who so kindly provides free libraries for the asking, and prevailed on him to give a sum sufficient to have chosen a larger site for a larger hall, so that all the different societies could have found refuge under the wing of the R.H.S.?—A. JEFFERIES, Moor Hall Gardens, Essex.

[Mr. Carnegie was earnestly appealed to, by influential gentlemen.—Ed.]

Chrysanthemum Critique Controverted.

Reviewing the remarks under the heading "Successful Varieties of Chrysanthemums," page 532 ("J. of H.," Dec. 10), I find "Sadoc" describes Mrs. T. W. Pockett as a sport from Nellie Pockett. This is quite wrong, as it is one of Mr. Pockett's Australian seedlings, and was sent out by Mr. W. Wells of Earlswood Nurseries in the spring of 1902. Cheltoni is the only sport that I know of coming from Nellie Pockett, and this was sent out by Mr. Wells last year. Then again on page 533 "Sadoc" is in error in his selection of what he describes as true Japanese incurveds. He classes Mrs. T. W. Pockett as an incurved "Jap," and of "rich yellow colour." Blooms that I have grown of this variety have been canary yellow, and as good a type of Japanese bloom as Viviani Morel when seen at its best on the exhibition boards a few years ago, and every petal, from start to finish, reflexes. Calvat's Sun is a grand variety, but it does not meet my ideal of an incurved "Jap." The same remark applies to Godfrey's King. "Sadoc" would make a poor authority to look to if he classes Mrs. T. W. Pockett (a true Japanese), Calvat's Sun, and Godfrey's King as belonging to the section known as Japanese incurveds. Madame Waldeck Rousseau rightly belongs to this section, but a more wretched colour in a Chrysanthemum I have never seen. I have grown it this season for the first and last time.

Returning to page 532, under the heading, "Non-successful Varieties," I agree with "Sadoc" that W. R. Church has not been seen at its best this season, but the distinct green tip which he complains of is quite natural, and very pretty; in fact, quite charms me. Mrs. Barkley with me has been extra fine this year, both in size, form, and colour, so that I cannot let this variety pass as a failure. Again, Godfrey's Pride is described by "Sadoc" as too small. Blooms I have grown and seen staged are quite up to exhibition size, and I will be greatly surprised if it does not stand in a good position in the Chrysanthemum analysis which Mr. E. Molyneux has again kindly undertaken to prepare for the benefit of Journal readers. Exmouth Rival is the grandest dark coloured "Mum" I have seen; no up-to-date grower should be without it. One of the blooms staged by Mr. Godfrey at the N.C.S. November Show, at the Crystal Palace, was fully up to exhibition size. And blooms such as this would be most acceptable in stiff competition in a class of 24 Japanese, distinct. Guy Hamilton was shown at Birmingham 8in and 9in in depth—so one of the judges informed me—which disposes of "Sadoc's" assertion.

This season Mr. R. Kenyon, of Woodford Green, had a fine lot of Madame Herwege. The plants were about 8ft high, and each carrying three blooms, almost as large as those of good Madame Carnots. They were magnificent results from skilful culture. Mons. L. Remy has not been shown much this year, but last year it was shown at nearly every show in the kingdom. It is early to class this sort among the derelicts. Lily Mountford, I must admit, loses its pretty rose colour and becomes "washy," but that is after it has been in bloom a fortnight; but so do many others of less merit, and in less time than this variety. Alfriston, as shown by Mr. W. Mease in the first prize 48 Japanese at the Crystal Palace in November, certainly appeared to beat that grand old warrior Edwin Molyneux in form and size, but not in colour, though in the latter it is almost identical. There is room still for the old favourite when well grown.

Lastly, Mr. "Sadoc," I should like to say that J. R. Upton is, with me, one of the best. The blooms are of huge size, grand form, and excellent in colour. A vase of 6 blooms won for me a great victory over huge blooms of F. S. Vallis at the N.C.S. Show in November. Mr. Charles Beckett also had J. R. Upton magnificently staged in one of the 12 vases he staged in the Great Vase

Class. Lady Cranston, the white sport from Mrs. Barkley, is the gem of this year, and is one of the most lovely flowers I have ever seen.—A. JEFFERIES, Moor Hall Gardens, Essex.

I never felt more relieved in my life than I did this morning (Friday, December 18) when reading the letters from R. Barnes and "A. H." on page 561. Since reading "Sadoc's" letter of the week previous I felt sort of "mixed up." I wondered if it was "Sadoc," or myself, or the "Mums" he named that had gone wrong, because I have taken particular notice of the best varieties from west to east, and from south to north this year, for a very special purpose. Most of those which "Sadoc" mentions as being in a decline I find, on referring to my notes, have been in the very best form. And I find that I have given many of those declining varieties a position amongst the best 24 Japs in existence. The "proof" has reached me from the printers, and I could not find courage to alter the position I had given them; neither did I, in spite of "Sadoc's" article. Therefore this morning's "J. of H." took quite a big doubt off my mind, this being, Which of the three was wrong? It appears it could not have been me, or the "Mums."—W. WELLS, Earlswood.

I am not surprised to find my remarks on page 532 taken exception to by what I term sentimentalists showing a weakness for particular varieties that have been great favourites in the past. I did not criticise the varieties without due regard to facts, as I have had abundant opportunities to see the blooms presented under varying circumstances of locality, probably rather more than either of my critics. The "less inexperienced readers," I am sure, will welcome Mr. R. Barnes as their champion to look after the interests they are unable to perform. Let us see what are the actual facts of the difference of opinion between us all. In the first place I did make a mistake in describing Mrs. T. W. Pockett as a sport; it is one of Mr. Pockett's best Australian seedlings. Perhaps Mr. Barnes has seen one late bloom of Lily Mountford with sufficient colour tint to make it attractive, whereas I have seen scores, and not one of them anything equal to what it was when first introduced. J. R. Upton, now, is generally the palest of yellow instead of that rich golden yellow which was its charm. Mrs. Barkley has been most "washy" in its colouring, which denotes weakness in constitution; the florets, too, are flabby and badly formed.

Florence Molyneux has lost size of bloom, and that whirl of floret that was its great characteristic, in spite of many attempts "to grow it properly." Perhaps Mr. Barnes will supply the remedy in that respect, and also how to get rid of the green tinge that has so persistently characterised W. R. Church this season. I note Mr. Barnes has a qualm about Mrs. J. Lewis, M. Louis Remy, and Le Grand Dragon. He says: "Given a better season, there is no reason why they may not be as good as ever." He will find something more is wanted to elongate the petals to their former length. T. Carrington and Australie have been often shown, but how? Why, without that perfect curl and density of petal that was their great charm. The change in them now so palpable is the stepping-stone to oblivion! Madame Cadbury has lost breadth and length of floret. I do not connect Lady Ridgeway with the hairy section as Mr. Barnes assumes. Ah! Mr. Barnes, I was told years ago "never to assume anything." If Duchess of Sutherland does not belong to the incurving Japanese section, to what does it belong?

I will now turn to "A. H.," who is no doubt an enthusiast possibly with a limited scope of practical observation, although from his own showing he is a deep reader of reports. The fact of W. R. Church being staged so many times does not improve its individual quality. The reports of shows and classes, which are now numerous, must be made up with some varieties. If none but those that are staged in the best condition were eligible, how could we get competition? Where one bloom of W. R. Church had the "green tips" when it first came to light, hundreds have it now. I have a hazy recollection of complaints being made that this variety then showed too much colour for some (those who could not produce it). What cause is there now for the change? I would ask. Harking back in a sentimental way will not win prizes. Replacing those varieties that have done good service by their superiors is the way to do this. Sentimentalists are only notorious in that one line. The rage at the present time is forward, no time for looking back; there are plenty to do that! He that wins hesitates not.

The fact of Gny Hamilton and L. Mountford winning certificates for premier blooms is not a proof of their excellence, but rather a weakness in their opponents. Perhaps "A. H." will tell us how to produce Mrs. J. Lewis in such a manner as to class it as one of the best whites. Does he say the Cardiff blooms were equal to those staged at the N.C.S. November Show two seasons ago? I do not doubt for one moment that many varieties I point to as having had their day will be found well up in the next analysis. How can a list of fifty varieties

be made up without them? I would ask. That even is no proof the blooms will be seen in the finest condition next year.—SADOC.

The Proposed Gardeners' Association.

Two very interesting letters on the above project appear on page 536, the first from a no less authority than Mr. F. W. Burbidge, and the second from "W. B.," who is evidently a man of careful thought. Mr. Burbidge is evidently in favour of the association; but "W. B." asks pointed questions. Like a good many other people, he does not appear to be quite clear what the objects of the proposed association are, and how it is going to benefit gardeners generally, either financially or socially. Of course, the promoters of the idea may see further, but it is quite evident that the task before them is beset with difficulties. I quite agree with "W. B." that the association, if formed, must not be in any way antagonistic to employers. In fact, it must have no suspicion of being a trade union, nor must it attempt to dictate to employers, owing to the peculiarity of the gardener's position.

I quite think that the intelligence and general bearing of the average gardener are sufficient to place him above the ordinary run of domestic servants; but he is a luxury nevertheless. Even the meanest employé in a factory or workshop is so much a part of the concern that he has a claim on it, and his employer cannot do without him if he is to make money out of his business, hence the power of labour union. But the gardener's case is different altogether, as he caters for the pleasure, and not the pocket [?] of his employer, and is, therefore, dispensable. Again, there are so many grades of gardeners, that even the definition of the word is not clear. In short, the gardening door is always wide open, and if anyone who potters about for a year or two in a horticultural establishment likes to style himself a full fledged gardener, who is to say him nay? One question, therefore, is whether the association will establish grades of gardeners, and how will the distinctions be made? It seems possible, even probable, that the association, if formed, may do good and be of some help to gardeners; but I am afraid that there is not much hope unless it is founded on lines that are not in any way distasteful to the majority of employers. A union of colliers or bricklayers may demand certain terms, but a union of gardeners must ask for them, and be extremely careful also how the request is put.—H.

It is truly gratifying to see that an idea which has occupied the minds of many intelligent gardeners is on the eve of becoming an accomplished fact. In all the debates upon the subject which I have heard, most emphasis was always placed upon the important question of finding situations. In Scotland, some twenty or twenty-five years ago, the glut of gardeners was very much out of proportion to the demand, and consequently places were less easily acquired. After the great calamity to the country caused by the City of Glasgow Bank failure, the outlook was indeed anything but bright for the gardener, in whatever sphere he laboured. If a journeyman, and he failed to get suited on the "Term Day," he had to divide his chances of getting reinstated in the spring, between the precarious employment and pay afforded by the nursery (and even that was welcome to many a young fellow) and the length of time his necessarily small savings would help him to eke out an existence in lodgings in the Metropolis. Foremen's chances were very much less, and as for head situations they are perhaps always scarce, but about this period such were only got with difficulty. The writer experienced his share of this depression, though never disemployed since he began.

I saw then that there was room for a better arrangement of the employment of gardeners by the formation of a huge corporate body such as that now aimed at, but slightly more elaborate, inasmuch as to include all regular gardeners; that is, everyone who served a full apprenticeship. I fail to see the workable nature of the new scheme, or its use, if it does not include journeymen, for is not their share in the success of such an undertaking as important from both sides of the question as that of foremen and heads?

Another very important thing in connection with this matter is the necessity for a circulating library to contain books, ancient and modern, that have a bearing upon gardening. In most horticultural associations this is a promissory condition of the rules, but seldom ever executed. I have often urged this necessity upon some of the most prominent members of the Scottish Horticultural Association. By arrangement, books could be circulated from the central library to all other minor associations throughout the land, thus bringing all books, otherwise impossible of access, within the reach of all. Lastly, every attempt shall, I hope, be made to keep any form of trade unionism in the background, for as every sensible man knows, such coercive measures would only meet with unsucess, which they would deserve. Therefore, all that could be aimed at is simply to raise the profession, in a certain measure, out of the depths into which it has fallen through the ingress of irregular professors, and generally raise the standard of the regular practitioners' intellect.—D. C.



Executive Committee of the N.C.S.

A largely attended meeting of the executive committee was held at Carr's Restaurant, 265, Strand, on the 14th inst., Mr. Thomas Bevan presiding. The minutes of the last meeting having been read, the secretary reported that the president, Mr. Charles E. Shea, had generously promised to renew his special prizes at the November Show in 1904. The prize money awarded at the December Show was announced to be £32 13s., the secretary stating that several who had entered were unable to exhibit owing to the rapid fading of their flowers consequent upon the damp weather. An interim financial statement was submitted, showing a balance in hand at the bank, after paying the December prize money, of £160 6s. 1d. To this was supplemented a statement that cheques had that evening been drawn for £102 14s. 1d., leaving a balance of £57 12s.; that realisable assets might reasonably be put at £65; the outgoings to the end of the year, about £45; so there was every probability of a satisfactory surplus at the end of the year.

The chairman reported the officers had waited upon the general manager of the Crystal Palace Company, and they had suggested some increase in the amount given by the Company for the November Show, and he had every reason to believe there would be a favourable response; also that it was practically understood there would be no other exhibition held in connection with the November Show in 1904. It was resolved that in addition to the November Show next year there should be the usual early exhibition on October 4 and 5, and a late show on December 8 and 9.

The secretary stated that by way of adding to the interest of the November exhibition, some members of the committee and others had promised special prizes of five shillings for the best individual blooms of certain varieties of Chrysanthemums they named, to be selected from the whole show, and that he had reason to believe some sixty of these prizes at least would be forthcoming. Several members of the committee present signified their wish also to give prizes for varieties they named. The details would be considered by the schedule revision sub-committee, who would make recommendations to the executive committee.

He further stated that an old and liberal supporter of the society had offered the sum of five guineas towards an evening exhibition of the best later-flowering market varieties, to be held near Covent Garden either just before or just after Christmas, 1904. The main object sought would be to ascertain the best varieties for producing the best effects under artificial light. It was believed market growers and salesmen would become interested in the experiments, and give it substantial support. The secretary will report progress at the next meeting of the committee.

The annual audit of blooms at the November Show in the competitive collections was submitted by the treasurer, Mr. A. Taylor, all bunches being set down as individual blooms. From this statement it appeared that 1,764 blooms had been staged, against 2,544 in 1902, and 3,378 in 1901, the decrease in the present year being largely attributable to the incidence of the weather. A division of the blooms into their several classes showed: Japanese, 1,086; incurved, 444; reflexed, 24; large Anemone flowered, 132; Anemone pompons (bunches), 12; pompons (bunches), 48; singles (bunches), 18. The greatest falling off was in the Japanese blooms; several exhibitors who entered at the November Show failing to appear from decay of their flowers. Ten new members were elected, and the Darlington Horticultural Society was admitted to affiliation. The proceedings closed with a vote of thanks to the chairman.

Rust on Chrysanthemums.

Though the rust has not been anything like so rampant as in some past years, there is not that immunity one would wish. We found that not until quite late in the season did it spread from leaf to leaf, and in very many then, it defoliated the plants as in past seasons: and there were far too much for a healthful advance of the blooms in every case. One firm of nurserymen has this year expelled entirely their stock of Chrysanthemums because rust was so virulent as to make their cultivation profitless. They elect to buy rather than grow, for their florists' work, and in which they have an extensive output. To them this must be a matter of serious moment, and

the step taken is one that would not suggest itself except under such extraordinary misfortune.

The dying out of the infection was a subject of slight discussion last year in the Journal pages, and the editor would, I feel sure, welcome any further comment calculated to assuage the dreaded fear in this dire affliction. A problem that seems difficult of elucidation is, Why should one's neighbour, only a short journey distant, be absolutely free from infestation, while one's own continue under the baneful influence of the rust spores? Diseases one would naturally expect to be more rampant in a year of rain and absent sunshine than in a more normal one, but the fates seem, so far as I can gather, to have decreed it otherwise. But even this small speck of consolation scarcely justifies the hope that the near future portends immunity almost, or quite wholly, as affecting the market plant or the specimen bloom.—R. A.

Novelties.

SINGLE-FLOWERED VARIETIES.

Captain Allsop is a finely formed flower, rich yellow in colour. Mrs. G. W. Forbes has flowers fully 5in in diameter, of a rich purple maroon colour. Felix, terra-cotta, very attractive. Starlight, pure white with pointed petals, very free.

Pretoria, yellow. The florets are wide apart, very attractive. Sir G. Bullough, rich yellow. Annie Farin, dark red. Horatia, terra-cotta base, gold tips. Mrs. C. Symus is best described as a rose coloured Mary Anderson.

The Bride, pure white, with a curl at the tips of each petal, fully 6in in diameter. Elsie Neville, crimson terra-cotta. Kate Williams, rich yellow. Miss F. Wilcox, white flushed pink with a most charming disc.

Mrs. T. C. Warden, pure white. Mrs. E. Roberts, pale pink. Mrs. R. M. Parkins, clear yellow. Glorious, a large Japanese variety, rose colour, base of petals white. Kathleen Pestifield, deep rose, with a white ring at the base.

The Queen, Japanese type, with twisted petals, crimson red. Cliban's 20th Century, golden bronze, shaded yellow. Kate Williams, golden yellow, florets twisted. Ladysmith, pink, very free. Mary Paul, a soft Malmaison colour, passing to white.

Mrs. R. J. Lockhart, dark crimson, with yellow disc and tips of florets. Nora, soft pink, with a pure white zone around the disc. Star of Honour, pure white, with a cream centre.

INCURVED VARIETIES.

Mildred Lyne is a sport from the well known Mrs. H. J. Jones. The colour, gold, striped and suffused with rose, a distinctly promising variety.

Embleme Portevine has flowers fully 5in in diameter. The florets are short, very thickly set. The colour is rich orange yellow. Mr. F. King is soft pink in colour, with long narrow petals, closely incurving.

M. L. de Lebusquette, crimson colour on surface, with chestnut reverse, a closely incurving variety.

DECORATIVE VARIETIES.

Madame Emilien Jolivet is an improved Mdle. Melanie Fabre, rose pink, edged with purple. Pride of Keston is a small flowered Japanese variety, violet purple in colour, very dwarf and free. Scarlet Prince, a free flowering bright red Japanese. Indian Chief, rich red.—E. MOLYNEUX.

Modern Progress in Horticulture.*

(Concluded from page 556.)

One of the most potent aids to progress in horticulture is travel. We must all go to gardens, nurseries, or exhibitions both at home and especially abroad to obtain new ideas and methods and to see what our competitors are doing. The decorative plant cultures of Bruges, Ghent, Brussels, the bulbs at Leiden or Haarlem, the shrubs and trees at Boskoop, are only a few of the object lessons in commercial gardening our own growers ought to see for themselves. Even so it seems to be still a case of demand exceeding supplies, or an excess of population over the present cultivation and produce of the land. As things are at present there seems ample room for progress in the shape of more good market gardening, despite the fact that other countries may possess natural advantages, such as a better climate, State aid and instruction, cheaper land and labour; and last, but not least, better co-operative information bureaux and cheaper transit charges as well. English market gardeners are often too exclusive and independent: they fight shy of co-operation as a rule, and so they are practically at the mercy of the big carriers, whether by rail or otherwise.

One very patent sign of progress nowadays consists in the specialisation going on, especially in trade or market gardening. Some, indeed many, of our best cultivators are specialists

* A paper read before the Horticultural Club, London, by F. W. Burbidge, M.A., V.M.H. Printed in Journal of the Royal Horticultural Society.

in the best sense of the word. It is easier and cheaper to grow a house full of one thing than a house full of many things. One man becomes famous for Grapes or Peaches, and another for Rhubarb and Seakale, or Asparagus, or even Mushrooms; another grower takes up Carnations or Roses, Palms, or Ferns; and we have even specialists devoted to Lily of the Valley who can supply flowers of it practically every day in the year. We have Tomato, Potato, Sweet Pea, and Daffodil specialists, and these men are bound to surpass growers who divide their capital and attention amongst too many separate things. The word specialist spells progress. The planting of groups or masses of one good plant, or shrub, or tree, instead of the old method of dotting about single plants of almost everything, is one of the most radical and far-reaching of all modern methods in gardens.

In fruit-growing the same principle is going on, and instead of an orchard of fifty or a hundred trees, all different, we have perhaps ten to 500 trees of a kind, and only the best and most useful or profitable kinds or sorts are grown. The mixed-muddle orchard or fruit-garden has gone the way of the mixed-muddle shrubbery and plant-houses, and so far there certainly have been progress and improvement also during recent years. There have been revivals, too, in the garden; sundials and quaint old urns of lead or stone are being introduced to many brand-new gardens—"old wine in new bottles"—and not always of good taste or right proportion. Instead of the old moats for protection, and fish or stew ponds for food on fast days, we have Water Lily pools or tanks and canals, and we have borrowed the old gazebo or pergola from Italy, not for our Grape vines, but for Honeysuckle, Clematis, and rambling or climbing Roses. Hedges of clipped Holly, Box, Yew, or Cypress are being again used for shelter in places of walls, and I may add that Levens and Elvaston must look to their Laurels or other old formal trees, for there is a marked revival in the shape of corkscrew-twisted and "poodle-clipped" evergreens.

Even in garden literature there is progress, thanks in the main to photography and process blocks—and may I add competition?—since we now have a baker's dozen of weekly (and "weakly") gardening newspapers where we formerly had only two or three. There are, or are to be, revivals in our craft literature also. For some years all the nice old gardening monthly magazines with coloured plates (if we except the "Botanical Magazine") have been dead and almost forgotten, but a revival has taken place in the shape of "Flora and Sylva" which Mr. W. Robinson has recently taken in hand. I may be allowed to say that with all our many horticultural papers there appears to me room for at least one more. None of us can read everything of interest now published in the numerous papers and books devoted to gardening in all its many phases, and I think there is ample room or scope for a weekly digest and index of all they contain. Such a paper, or let us say horticultural register, well done and of a convenient size for binding would be a great boon to us all.

New methods are few only, but of great economic importance. Chief amongst them perhaps is the "retarding" process, or freezing apparatus, by which many hardy shrubs, plants, bulbs, vegetables, and flowers may be held inanimate for months and then brought to perfection at will. In this way we get Lilac and Lilies and other things any day in the year, or just when we require them. The use of ether, again, assists materially in the process of forcing or acceleration, and the electric light may on emergency be pressed into our service to the same end.

These scientific resources of civilisation have already worked wonders as practically applied by trade growers, and it would appear that time and season will be done away with, and it will be possible to have many choice garden products in the market and on our tables any or every day in the year. We must look also for new legislation on the important question of diseases (fungoid or otherwise), insects, and weeds in gardens and fields alike. Sir James Rankin, M.P., has already a Bill in the House of Commons, which has passed the first reading, "with a view to the eradication of disease and insects from amongst fruit trees, &c., in nursery gardens." This will mean some quarantine regulations and inspection of imported stocks, seeds, &c., and may lead to a pathological section being added to the existing machinery of the Department of Agriculture; in a word, it is becoming as serious to harbour diseased or insect-infected plants as it is to keep diseased animals.

In considering horticultural progress the Royal Horticultural Society may be taken as an index, or let us say as a barometer, showing the high pressure and popularity of gardening in England. We need scarcely ask whether garden craft is spreading when the fellowships of our premier Society are increasing by a thousand or more year by year. Then the Royal Botanic Society is also progressing and doing good work, though perhaps along slightly different lines. To put the difference of method, one may say that the R.H.S. teaches gardening as associated with botany, while the R.B.S. teaches botany as associated with gardening. It is tweedledum v. tweedledec, and the result is a loss of force and to some extent a needless competition, and it is a matter of regret that the two societies cannot co-operate for the public good. Local societies we must have, and very useful work is done by them; but even these are all the more useful

if federated with the central authority and prestige of the R.H.S. of England. On all sides we see evidence of combination and co-operation in the farming world and in other forms of productive and distributing commerce, but gardeners as a body hold aloof from organised association, as some of us think, to their own loss both individually and collectively.

In these concluding lines I sum up my present argument as this, That method and skill in the best private gardens are up to a very high state of excellence, but that the most economical production and the largest and best crops—I do not say of the best varieties in all cases—are to-day produced in our concentrated trade or market gardens. I also may suggest that no finer produce is grown in private gardens now than was grown fifty years ago, either in the shape of fruit, vegetables, or flowers, despite the influx of new and improved varieties. The old records now beaten are but few.

I am no politician or prophet; I merely note the signs of the times; and I hope I have shown, or at least suggested, that gardening, formerly aristocratic, conservative, and secretive, is now democratic, more generally diffused, and more liberal, and that as an art or craft it is open to peer and peasant alike; open to "all sorts and conditions of men," open as is the sunshine or the light of day.

Gadding and Gathering.

Notes from Kew.

Cestrum aurantiacum furnishes masses of its golden, trumpet-shaped flowers, and what we took to be *Dahlia imperialis* (though like many other things at Kew, it was not named) was flowering at the apex of its succulent stems, 10ft high. The blossoms are single, and pale mauve colour.

An interesting plant is *Dermatobotrys Saundersiae*, with bright crimson, tubular flowers (5-cleft perianth) in verticillates of twelve. These are borne at the ends of the half-ripened shoots which are not unlike the woody stems of *Hydrangea Hortensia*. It comes from Natal. The flowers are over 2in long, and are narrow. *Cytisus filipes* is a white Broom, now in flower.

Libocedrus macrolepis with flattened imbricate leaves, in a general way resembling *Thujopsis dolabrata*, but of a darker green and much flatter in structure, is represented by a bushy plant in a 10in pot in the Temperate House. It is about 3½ft high. The label bears the record "Veitch, '01," which would seem to indicate that it is a novelty introduced by the Chelsea firm. While naming Conifers, attention might be drawn to another splendidly ornamental subject—*Cupressus funebris glauca*. It grows very fast, for a specimen in the Himalayan division of the Temperate House at Kew has attained a height of about 20ft in four or five years. The branchlets are "weeping" in character, and the colour is slaty-blue, otherwise called glaucous. It is very distinctive and graceful.

To the list of plants in flower in the greenhouse which I gave recently, there should be added Roman Hyacinths, Yellow Pottebakker Tulips, *Tibouchina macrantha*, *Chironia linoides*, *Tecoma Smithi* and *Browallia demissa*.

Ivies.

Ivy English Ivy, perhaps the most typical plant or climber that adorns Old England. People away far across the ocean, in sunny colonial homes, when thinking of the Mother Country must picture in their minds the old half tumbledown outhouses standing by the pretty cottages, and the outhouses are always loaded with Ivy. Or it may be the walls over the bridge that spans the stream in which they were wont to wade and "guddle" for trouts or other fishes in the days of their childhood. Ivy! English Ivy! Thousands of Ivy plants are inserted in the ground every autumn, winter and spring (summer as well, we might as well say), but, alack! it is mostly *Irish* Ivy that is planted. Nevertheless, "Irish" Ivy is "English" Ivy too; and that makes a bull! When visiting the nurseries of Messrs. Wm. Paul and Son at Waltham Cross some little while back I noted the names of those Ivies that are most commonly sold, and which can be procured from good nursery firms everywhere. There was the Irish Ivy and its silver-leaved form; *amurensis* and *dentatus*, both large leaved forms. At Kew the largest leaved Hedera (Ivy) is one they call *grandifolia*, size about 5in deep (or more) by 4in wide at the top. *Hedera Helix* (which is the botanical name of the Ivy variety, *atro-purpurea*, has moderate sized purplish leaves. *Aurea spectabilis* is yellowish, and recommended for walls, the same as *Algeriensis*, which I always think is one of the most neglected wall plants the British gardener deals with. It is very hardy, and is so cheering, neat, clean, and pretty. *Walthamensis* is a particularly neat and useful variety of the English Ivy. Lastly, I would name Emerald Green, which has somewhat rounded leaves; that is, it is about as broad as long, 3in either way, and of a brighter green than most Ivies. For root-stumps, banks, rough coverings, it is very beautiful and commendable.—WANDERING WILLIE.



Aphelandra nitens.

A stove plant, which, were it only for the intense claret colour of its elliptic-ovate leaves, is deserving of popularity; but in addition to them the erect stem is terminated by a dense bracteate spike of scarlet flowers. Grown annually, says a contemporary, from cuttings in small pots, it forms a useful, highly decorative plant, very effective when intermingled with lighter coloured subjects as an edging for stages.

Freesias.

The best locations for these after housing, is on shelves well up on the light, observes "American Gardening." They are now making satisfactory growth, and some supports must soon be given. Sometimes their brush is used; other growers stake each shoot separately—a big task where thousands are grown. A good plan is to cut some rather coarse mesh wire netting the size and shape of the flats or pans, and support the same by a couple of sticks at each end of the flats, or three or four sticks round the pans. Let the netting be suspended directly over the plants at the height of, say, six inches for the first piece, and as the plants grow fasten another piece about eight inches higher; this will be found to support the plants nicely, and no trouble will be found in cutting and pulling the spikes through the netting. These pieces of netting, once cut to the required size, can be used each successive year. As flower spikes show some liquid manure can be given. Do not give it too strong, or the leaves will quickly show brown ends. As these plants will not stand heavy smoke, care must be exercised in fumigation.

Improving the Soil.

The difference between cultivated and uncultivated ground is most marked, and is readily apparent to even the most uninitiated when the results are seen in the produce derived from both, especially with kitchen garden crops. One of the best methods of improving soil is trenching. This process breaks up the ground to a considerable depth, and in time the beneficial action of air and moisture pulverises, ameliorates, and enriches the soil to such an extent that the roots of crops can not only easily permeate the improved medium, but readily abstract supplies of food. Although trenching is excellent, and proves to be serviceable sooner or later, yet there are times when it may prove misleading, and the results which follow not at all satisfactory. This, probably, is owing to the fact that in the process of trenching good soil has been buried and indifferent subsoil brought to the surface; in fact, the layers of soil have been reversed. Time will rectify this, but it usually happens that a crop must be grown on the land immediately after. Land that has not previously been trenched is the worst in this matter, therefore the best way to act is to adopt the process known as bastard trenching, which consists of keeping the soil in its original position, but deepening it all the same.

Improvement by trenching can be applied to all kinds of soils, light as well as heavy; but special methods must also be adopted to modify the effects of some particular class of soil. For instance, sandy soil is often too hot and dry for the best results in cultivation, hence the addition of some loam of a clayey character, which may be pounded and spread on the surface, afterwards digging it in when pulverised by frost. Manure of a cooling character such as cow manure should be added to such soil. Chalk may also be added with advantage, or a little lime. A clay soil, on the other hand, is usually so very tenacious that a dressing of lime will help greatly in breaking it down; but very stiff and obstinate clays indeed cannot be improved quickly except by burning, which will cause it to crumble. The addition of sandy loam, road scrapings, or other gritty material will greatly improve ordinary clayey soils. In turning up stiff soils for the winter, leave the surface very rough so that the action of frost may have free play. It is a good plan to form it into ridges, whereby a larger surface of soil is more completely exposed.—E. D. S.

The Poplar Tree, Poplar.

It is not generally known that there is now a great demand for the Poplar tree. Since the introduction of trams, hundreds of these stately and ornamental trees in Sussex have been felled and cut up into small blocks to be used in conjunction with the brakes on electric trams. They are used extensively on the trams in Brighton, and so effectual are they that the authorities do not care about utilising a different kind of wood, though, as is generally known, the Poplar was not, at one time, looked upon as being of much worth, from a commercial standpoint. There are not many of these trees in the county now, and the supply of the blocks will soon be insufficient to meet the demand, if such is not the case already.

Ficus diversifolia.

The smaller species of *Ficus* are not much cultivated in ordinary gardens, but some of them are suitable for growing as a variety from the monotony so frequently seen in greenhouses and conservatories. There is a pretty little *Ficus* in the Glasgow Botanic Gardens, called *F. diversifolia*, which is worth growing for the stage among flowering plants. It is of quite compact and bushy growth, the specimens at Glasgow being only some two feet or so in height. The small leaves are pale green beneath, and bright green, dotted with small brown specks, above. They are narrowed to the base, but rounded at the apex, and leathery in substance. It thrives well under greenhouse treatment. The small fruits add to the interest of the plant.—SOL.

Harmful effects of *Humea elegans*.

In the struggle for botanical existence one plant will crush out a weaker fellow by depriving it of light or air, by throttling it or starving it; but while all these, and many other methods, are familiar to the evolutionist, it has not been generally known that one plant may poison another. An apparent instance has, however, lately been noticed in the plant called *Humea elegans*, which exhales a powerful odour like Russia leather. It was found that when placed in a greenhouse near a Peach tree a comparative burning or withering of the young Peach leaves in its neighbourhood was the result. It did not inhabit the same soil as the Peach, but even when some distance from it seemed able to exercise a harmful effect, which at last resulted in stripping the Peach of all its young leaves.

Galtonia candicans.

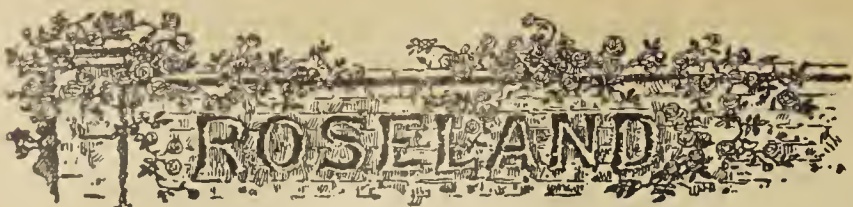
This noble Liliaceous plant should require no formal introduction to any professional gardener, yet we bring it forward now, when new beds, borders, and shrubberies are being made, in the hope that even more plants of such a beautiful subject may find a station in erstwhile vacant places. Placed in beds along with *Tritomas* or any scarlet or crimson-flowering outdoor plant, whose display is made during August and September, the *Galtonia* furnishes a splendid contrast. The illustration on the opposite page shows a natural size inflorescence, and the spotless white bells all droop, as shown. The strong, fleshy stalks rise upright from the succulent foliage, a yard or 4ft high. The bulbs delight in a deep sandy loam, with which is incorporated leaf mould, or similar humic material. Once in place, they need not be disturbed for three or four years. The present time is suitable for planting. Sometimes the plant is cultivated in pots, and flowered in the open air. They are thus useable on formal fronts and forecourts. For protection to the planted-out bulbs in winter, cover the crowns with flaky leaf mould.

The Grassy Transvaal.

The Grasses are the most conspicuous feature of the Transvaal flora, at least in the high veldt. Succulents are practically confined to rocky kopjes and randjes (ridges). Bulb and corn-producing plants abound among the Grasses. Trees and shrubs are scarce, as a rule, but evergreen *Proteas* and other bushes or small trees occur on kopjes and randjes, and there are dwarf woods near water. In the moist veldt Grasses are eight or ten feet high. About 50 genera and 130 species of Grasses are known to science in the Transvaal. Of the genera as many as 44 are seemingly indigenous, a fact accountable to the isolation of the country, and unlikely to continue much longer. *Andropogons* and *Anthistirias* are, perhaps, the commonest Grasses of the high veldt. Bermuda Grass (*Cyniopsis dactylon*) is frequent beside roads, in lawns, and cattle kraals, and seems to be introduced by cattle, which are fond of it. The Reed (*Phragmites vulgaris*) is common along streams. A rainless winter of four to five months (May to September) and a fair rainfall (25 to 30 inches) the rest of the year has developed the habit of producing bulbs, tubers, and corn. Many of the plants flower without rain having fallen for months, but the heavy dews may help to start the growth. To some extent, also, the new Grass comes without rain.



Galtonia (Hyacinthus) candicans. (Nat. size.)



Planting Stocks.

I have seen lately several bush or dwarf Rose plants of long and strong growth blown over by the wind, and in some cases nearly, if not quite, blown down. The cause of this is plainly a deficiency of fairly horizontal roots on the side from which the wind came.

But we must not necessarily conclude that there has been bad planting of the Rose as received, for I regret to say that my experience is that a large proportion of dwarf Rose plants sent out from the nurseries are wanting in all-round roots, and that not a few have unbendable roots on one side only, sometimes all in a bunch.

This is plainly owing to haste and want of care in planting out the rooted cuttings for budding. If they are just dobed in, in rows, as one would plant out Cabbages, with the roots all in a bunch in one hand, it saves, no doubt, a great deal of time and labour in the planting, and also in getting up the maiden plants for sale, for the spade may be put quite close to the plants on one side, as there are no roots there; but none of these can ever be perfect first-class maiden Rose plants.

Having seen lately the roots of some dwarf plants sent out by first-class firms, and having to-day had occasion to move a few of my own maidens and run-out stocks, it was impossible to avoid being struck by the difference of the spread of the roots. Amateurs in general no doubt are careful to spread out the roots horizontally in every direction when planting stocks; but will not our friends in the trade spend, if possible, a little more time and labour in doing the same, for we are, most of us, willing to pay accordingly for the best rooted and most perfect plants procurable?—W. R. RAILLEM.

Book Notices.

The Horticultural Directory and Year Book, 1904.

The present is the forty-fifth issue of this publication, and as an up-to-date directory it has become nigh indispensable to nurserymen, seedsmen, florists, and gardeners. The editor of the Horticultural Directory has each year the assistance of many nurserymen and secretaries of horticultural societies throughout the United Kingdom, who send him batches of envelopes which they (the nurserymen especially) have had returned, and the editor immediately causes inquiry postcards to be sent to ascertain who is gardener, or what alterations have been made. We believe some thousands of postcards are yearly sent out for this purpose, besides which, the notifications of appointments that appear in the gardening Press are duly recorded. It should be distinctly understood that only gardens where two or more assistants are kept are here included.

Sometimes it appears that even reputable places are unrecorded. Wherever such an omission occurs the compiler would be pleased to have intimation of the fact. He, on his part, has solicited the kindly help of the entire gardening Press, so that as wide a circle of contributors as possible was appraised, and what could he do more?

It is hardly necessary to describe the arrangement of the Directory. Each county in the British Isles is recorded alphabetically, and the names of gardens, gardeners, proprietors, and the nearest postal address are tabulated in four parallel rows. The whole arrangement of names is alphabetical throughout. Foreign and colonial nurserymen and seedsmen, curators of botanical gardens at home and abroad, secretaries of societies, and superintendents of parks are here listed, so that the representation is very wide. This year the names of the Victoria Medallists of Honour in horticulture are furnished, together with the names and addresses of horticultural instructors in England, Scotland, Wales, and Ireland.

Mistakes appear in places. That is, perhaps, excusable where 13,000 addresses are dealt with, but we would ask purchasers to note that the secretary's address of the Royal Gardeners' Orphan Fund is now 30, Wellington Street, Strand, London, W.C., and not the one given in the Directory. The price is 1s., or 1s. 3d. post free, from the offices of this journal.

Publications Received.

"The Amateur Gardeners' Diary and Dictionary," price 1s. This is published by "Garden Life," Hatton House, Great Queen Street, London. It contains cultural notes on the back of each leaf, the opposite side being blank for notes. * * "Journal of the Kew Guild," 1903, Vol. II., No. XI., contains many interesting letters from

Old Kewites in all parts of the world. There are also portraits and memoirs of A. Godefroy Lebeuf, Robert Mackellar, and G. S. Jenman, each deceased, and of Mr. W. Lathom, who recently retired from Edgbaston Botanic Garden. * * University College, Reading. "Scholarships for Young Gardeners."

"The American Florist." * * "Le Jardin." * * "Garten Flora." * * "The Journal of the Department of Agriculture of Victoria," November, 1903, part IV. Contents: The Need for Soil Investigations, How to Foretell Frosts, Spraying for Black Spot in Apples, Ringing the Currant Vine in Greece, Rainfall in Victoria, Fruit Pulp, Flax Cultivation in Europe, Kerosene Emulsion as an Insecticide, &c. * * "Report on Experiments on the Manuring of Turnips in 1901," by R. Patrick Wright, F.R.S.E., Professor of Agriculture, West of Scotland Agricultural College, Glasgow. * * "Report on the Relative Effects of Superphosphate and Basic Slag upon the Feeding Quality of Swedes," by John W. Paterson, B.Sc., Ph.D., Prof. of Chemistry, West of Scotland Agricultural College. * * "Agricultural Returns of Great Britain, 1903" (Produce of Crops) Board of Agriculture and Fisheries, 3, St. James's Square, S.W. * * "Le Mois Scientifique." * * "Annual Report of the Smithsonian Institute, Washington, 1901 and 1902." These are two stout, cloth bound volumes numbering over 450 pages each, and 9in by 6in.

Certificated Plants.

(Continued from page 559, vol. 46.)

THE POTENTILLA, now a much less popular plant than it was formerly, is, after all, not quite neglected, as sometimes a variety or two put in appearance in a collection of cut hardy flowers. No novelty in Potentillas of a striking character has come before the Floral Committee since 1895, when Mr. Maurice Prichard obtained an award of merit for the double yellow *P. californica*, a valuable variety which does not appear to have found its way into general cultivation. Of the most popular of the double varieties, and those which are most largely grown, are Louis Van Houtte, dark crimson, and the glowing orange-vermilion, William Rollison.

Strange to state, no award was made until 1878, when Prince Arthur obtained a certificate of merit; but it is not to be met with in any present-day list of hardy plants I have been able to consult. Some of the species or sub-species, of which there are a very large number, such as *P. atro-sanguinea*, *P. Hopwoodiana* (white shaded with rose), *P. nepalensis* (formosa), and a few others can be met with in old gardens, and when well grown they add greatly to the gaiety of the garden on account of their floriferousness; but many of the more modern varieties are of somewhat loose growth, and need to be tied to stakes in order to display their charms to the best advantage.

The Genus Primula.

The genus *Primula* looms largely in the lists of certificated plants. I have already dealt with *P. Auricula* under that heading. I can claim the honour of having obtained the first award made to a single Primrose, when I gained a certificate of merit for the rich maroon-crimson, *auriculæflora* in 1873. I had previously exhibited this on several occasions, only to find it passed over; but a little importunacy goes a long way, and at last the certificate was gained.

It was by crossing this on to *P. altaica*, a single deep lilac Primrose which was distributed by the late Mr. Charles Turner some twenty years previously, that there was gained that break in the single Primrose which originated the fine coloured varieties so plentiful in the present day. There was some difficulty in convincing the committee that the Primrose was worthy its consideration, but, when accomplished, my Violet Gem obtained an award in 1873, followed by Splendour and Violacea in 1874, and later by Brilliant, Amaranth, Ealing Crimson, Octoroon, &c. A little later came the late Mr. G. F. Wilson, with his blue varieties, Scott Wilson, G. F. Wilson, Oakwood Blue, James Nimmo, Hermann Wilson, and others; and yet, a little later, Mr. J. H. Arkwright obtained an award of merit in 1898 for his large yellow Evelyn Arkwright. *P. Elatior*, the Polyanthus, also underwent great improvement, and in course of time several varieties of my own and others' raising were recognised by awards.

The Giant or Fancy Polyanthus has come to be regarded as one of the most popular of spring bedding plants, and fine strains are now quite common. *P. sinensis* has been largely recognised by the Floral Committee. In 1860 the late Mr. C. Turner obtained a certificate for *sinensis atro-rosea plena*, while Mr. W. Bull had commendations in 1861 for *nivea plena* and *rosea plena*. In 1865 Messrs. Windebank and Kingsbury, of Southampton, who did so much for *P. sinensis* in the early days of its improvement, had a certificate for *Kermesina splendens plena*: Mr. R. Parker, one for a double white in 1868; and a little later Mr. C. Turner had an award for a semi-double striped variety. It is curious to notice that as soon as attempts were made to cross-fertilise the best of the single varieties, semi-double forms at once put in appearance, and they were not the

products of the old Double White and the Double Red, as is sometimes supposed, as neither of them produces seed.

In the early seventies, certificates of merit were awarded to three forms exhibited by Messrs. E. G. Henderson and Son, viz., Emperor, Exquisite, and Magenta King; and subsequently Gilbert of Burghley Park, Hillier of Winchester, and Tomkins of Birmingham, produced double varieties, which are still occasionally to be met with. Later still, Messrs. Sutton and Sons, of Reading, obtained some double varieties, the most important being the blue colour on Fern-leaved foliage.

I believe I am correct in stating that Messrs. E. G. Henderson and Son were the first to introduce the Fern-leaved type, but with whom it originated I cannot say; they obtained a commendation for *Filicifolia* in 1861, and subsequently for a white and a red form; later in time a very fine double red with a Fern-leaved foliage was obtained by Messrs. Windebank and Kingsbury about 1866.

The first of the single varieties of *P. sinensis* to obtain an award was *Delicata*, from Messrs. F. and A. Smith, of Dulwich, in 1862; and also, in the same year, one for *The Fairy*. Then Messrs. Windebank and Kingsbury produced and obtained certificates of merit for some seven varieties between 1865 and 1869.

A few weeks afterwards Mr. William Paul received a certificate for a single variety named *Waltham White*, a large white flower having dark flower-stems and leafstalks. Other varieties certificated in the seventies were *Fimbriata cœrulea*, *Coccinea*, *Chiswick Red*, *Rubro-violacea*, and several other double forms. In the early eighties Mr. Henry Cannell came to the fore with *Delicata*, *Dr. Denny*, *Emperor*, *Swanley Purple*, *Swanley Red*, &c. In 1882 Messrs. Carter and Co. gained a certificate of merit for *Holborn Blue*, the first of the improved grey-blue varieties, the type having come from Germany.

Subsequent improvements which obtained awards came from Messrs. H. Cannell and Sons, who produced such fine varieties as *Bridesmaid*, *Eynsford Pink*, *Eynsford Red*, *Her Majesty*, *Kentish Fire*, *Peach Blossom*, *Pink Queen*, *Princess*, &c.; and by Messrs. Sutton and Sons, whose *Giant Rosy Queen*, *Gipsy Queen*, *Rosy Queen* and others marked a distinct advance, and especially some varieties they have produced since the publication of the list of certificated plants.—R. DEAN, V.M.H.

The Liliaceæ.*

(Concluded from page 553.)

ARCHELIRION.

L. auratum, "the Golden-rayed Lily of Japan," is the queen of this section, and also of all the other sub-genera. It has been suggested that this species is a hybrid because its introduction was at a comparative recent date compared with some other Japanese species. Why it was not collected over 100 years ago is probably because, as a wild plant, it is found all over Nippon (one of the largest islands of the Japanese Empire), where, until 1859, foreigners were not allowed to travel. Of its varieties, "*macranthum*" and "*Wittei*" are the best of the light-coloured kinds, whilst the red-banded, *rubro-vittatum* and "*Crimson Queen*" are by some regarded as hybrids of *auratum* x *speciosum*. Regarding the nomenclature of the white varieties of *speciosum*, there has lately been an amount of controversy (or advertisement?) in the gardening Press.

From observation of the plants that have come under my notice, I would venture to offer the following as correct:—*Kraterzi*, the "*Japanese album*," is a pure white distinct form, with very reflexed flowers, the petals of which are markedly fimbriated on the margins; pollen, yellow or dark; stigma dark; midribs and stems green. The "*Dutch album*" is a *rubrum* in every detail except colour. Flower with flatter, less reflexed petals; pollen and stigma dark; exterior of petals (markedly in the bud state) suffused with a dark tint, also back of midribs and stems distinctly dark. *Album novum*, the best of the whites, has, combined with a more robust habit, a larger and more symmetrical flower, with yellow anthers, green midribs and stigma. It is interesting to note that this variety (described as new) is identical with the *albiflorum* described in Curtis's "*Botanical Magazine*" many years ago. Amongst these varieties I cannot find any to agree with *roseum*, which, in the true form, has always a green stigma and midribs.

Allied to *L. speciosum* by its leaves and to *L. tigrinum* by its flowers, is *L. Henryi*, a very handsome yellowish-flowered species. This is a form which has vastly improved when compared with the wild plants found by Dr. Henry. It is perfectly hardy, and frequently attains a height of 7ft to 8ft, producing from twenty to thirty flowers.

ISILIRION.

Of the erect flowering species, which are the *Liliums* most frequently planted in borders, and of which we have numerous garden varieties, mention may be made of *L. elegans*, var. *Alice Wilson*, which is one of the best early-flowering varieties; and

L.-c. var. *Batemani*, decidedly the best late flowering one. *L. croceum*, the "yellow Lily" of the cottagers' gardens; *L. dauricum umbellatum*, and *bulbiferum* are equally worthy of a place.

MARTAGONS.

The American species are essentially peat-loving subjects of easy cultivation and unique beauty. The freest grower is *L. pardalinum*, which in California is almost a weed, it increases so rapidly. It attains a height of from 6ft to 7ft, and produces its leaves in single whorls, whilst those of *L. Humboldtii*, a nearly allied species, are produced in biserrate whorls. Add to this *L. superbum*, which has bright orange crimson, heavily spotted flowers, and we form a striking trio. Burbank's hybrid *pardalinums* are deserving of extended cultivation. Many of them have this summer produced over thirty flowers on a raceme. *L. Grayi*, ruby-red, spotted with claret, and *L. canadense*, with its varieties, are slender growing forms with annual bulbs, also from America.

The two best scarlet flowered species belonging to the Old World are *L. chalcedonicum* and *L. pomponium*, and it appears superfluous to say that *L. candidum* is the finest white. *L. monadelphum* (golden yellow), with monadelphous stamens, and its variety *Szovitzianum*, rich citron spotted with black, and possessing free stamens, are the best of the early flowering yellows. The seedling bulbs of *L. monadelphum* are, according to one authority, said to increase in size below the soil without producing a green leaf, for two years.

Of hybrid forms, *L. x Kewense* is decidedly the best. This is a cross between *Henryi* and *Browni*, var. *choloraster*, which, in flower, habit, and bulb, closely resembles *L. auratum*. The cross was effected in July, 1897, and flowered July, 1900. *L. candidum* x *chalcedonicum* yielded the nankeen yellow form *L. x testaceum* (syn. *excelsum*). *L. Dalhansonii* is the result of a cross between *Martagon* var. *dalmaticum* and *Hansonii*; whilst Burbank's hybrids are of mixed parentage, including *pardalinum*, *Washingtonianum*, and *Parryi*.

Tulipa.

Since the days of the Tulipomania, when bulbs which sometimes had no existence, were sold from 2,500 to 4,600 florins, the "Sweet Tulips" have been intimately associated with "spring loves" and "budding poets." By reason of their varied hues, markings, and intensity of colour they stand pre-eminently in the front rank of spring-flowering plants. The genus comprises about fifty species, only seven or eight of which are cultivated. They are natives of North Africa, Europe, and Central Asia. The natural colours are yellow, scarlet, and violet of various hues, white being merely a de-colouration. Those generally known are essentially florists' flowers, which are all derived from *Gesneriana*, which was introduced into Europe in 1556.

The florists' varieties are divided into four classes. Breeders, self-coloured forms, deriving their name from the fact that self-coloured flowers are always the first product of the seed. This character they may retain from three to twenty years, when the colour becomes "broken." They are then termed Rectified Tulips, being now divided into Bizarres, if the ground colour is yellow, and the markings range from brown, through scarlet to black. Byblœmens are so named when the ground is white and the markings purple, lilac, or nearly black; and Roses, when the ground is white, the markings being rosy or shades of pink. When the markings are confined to the margins of the petals they are called "feathered," whilst a "flamed" flower is a feathered flower in which there is a beam of colour running up the centre of the segments from the base to the markings.

Darwins may be aptly described as true *Gesneriana* breeders, whilst the Rembrandts are feathered Darwins. In the scope of this paper it would be impossible to deal with varieties, and my remarks will therefore be confined to species and hybrids.

A. Segments uniform, acuminate: *T. acuminata*, *elegans retroflexa*. B. Segments not uniform: *T. Didieri*, *Billietiana*; C. Segments rounded at apex: *T. Gesneriana*, *macrosepala*. D. Segments acute: *Suaveolens*. E. Segments obtuse and peduncle pubescent: *T. Greigi*, *T. maculata pubescens*.

T. suaveolens yields our early *Duc van Thol* varieties. The Brides of Haarlem are derived from *pubescens*, which is itself a hybrid between *Gesneriana* and *suaveolens*. Whence we have the Parrots is still an open question. Some hold that they are descended from *Gesneriana* var. *Dracontia*, whilst it is also contended that they are derived from *platystigma*.

Of yellows, *retroflexa* is the best; two smaller species are *sylvestris* and *primulina*. *T. violacea* is a violet-coloured *sylvestris*, with which it agrees by its tuft of hairs at the base of the stamens. *T. Clusiana*, a delicate white, flushed red, and black basal blotch; and *T. Sprengeri*, dazzling vermilion, are two handsome very late forms, flowering in the beginning of July. *T. Kanffmanniana*, a mixture of red, yellow, and white, is the best early Tulip, flowering about March 20. In conclusion, I may be excused for quoting a higher authority when I say, "Consider the Lilies, how they grow."

* A paper read before the Kew Gardeners' Guild by Donald MacGregor. The sequence is based on Mr. J. G. Baker's classification.



Strawberries in Pots.

When the crowns of the plants that were started at the beginning of December to afford ripe fruit at the close of February or early in March commence swelling, and the trusses appear, the temperature may be advanced a few degrees by day, but 50deg to 55deg is sufficiently high at night. Syringe the plants lightly in the early part of fine afternoons. Examine the plants daily, and supply water to all that require it. Keep a sharp look out for aphides; they cluster on the swelling crowns, and if any appear, vapourise with nicotine, or fumigate with tobacco paper on two or three consecutive evenings. It is very important that the plants be perfectly clean, and fumigation must not be practised when they are in flower.

Another batch of plants should be placed in a house from which frost is excluded, removing the decayed leaves, loosening the surface soil, and, after removing the loose material, supplying a top-dressing of rich compost with a little steamed bonemeal added to it. Attend to the drainage; if defective rectify it, and wash the pots. The plants must be introduced during the next three weeks to shelves in a Peach house started at the New Year, or within a Strawberry house. La Grosse Sucrée, Vicomtesse Hericart de Thury, and Royal Sovereign are suitable varieties; also Keen's Seedling, Sir Harry, and President, with Noble.

Plants for starting later will be quite safe in their quarters outdoors, plunged in ashes to the rims of the pots, and a light covering of dry fern or litter may be given in severe weather, allowing to remain until the plants are thawed after being hard frozen; otherwise remove and expose fully in mild weather. If the plants are placed in frames the lights should be drawn off in mild weather, but in this and wet tilt the lights at the back of the frames, so as to throw off the rains yet let the plants have plenty of air. They cannot be kept too cool, and none should be allowed to suffer through want of water.—A.

Late Melons.

The dearth of hardy fruits for the winter stimulated an effort to continue those of summer into as late a period of the autumn as circumstances permitted. The season so bereft of its customary solar warmth, and with a contrary excess of rain, greatly hindered such a commendable object, not only in the actual growth of the plants, but their maturity of fruits and in flavour. Without the latter attribute Melons do not call for much favourable comment, though even when this is absent to an appreciable degree they still pass the daily courses of the dining room. While some kinds are good for late use and growth, others are comparatively valueless. It does not matter much what the colour of the flesh may be, there must be constitution, and a firmness of flesh and skin that will endure a slow progress, and the fruit remain sound for some days after being cut from the plant. This is rendered necessary, inasmuch as the gardener, anxious to place such crops to the best advantage, must needs keep them, as far as conditions allow, for special occasions. Shooting parties are, by common consent, frequent and perhaps necessary in November—some early, others late in the month; and as such events are not always made known to the gardener months prior to their date, provision can only be estimated in a sort of general way. I have frequently found that after Melons have been carefully stored, awaiting the eventful days, they collapse almost within a few hours of the time, and for this reason the growth of Melons becomes a matter of uncertainty in use or purpose.

In summer time, given normal weather, one may more easily calculate for special dates in the maturity of the fruits, but the case is different when one undertakes to provide such fruits for November. We have found British Queen, Duke of York, and Western Hero very good sorts for late use, but even these are eclipsed by the newer Late Perfection sent out by Messrs. Veitch. At Longleat, Mr. Gandy, Lord Bath's able gardener, has been most successful in providing November Melons, not only of large size—from 3lb to 6lb each—and in goodly numbers, but the flavour of the fruits has won considerable praise from host and guests alike. Gunton Scarlet is a favourite for the summer with Mr. Gandy, but it cannot compare with Late Perfection for November. In such a season Melons are usually judged from an ornamental rather than an economic aspect at party times; but in 1903, when Apples, Plums, Medlars, and Pears are so scarce, their appearance and value become considerably enhanced. A common trait with late Melons is for

the plant to collapse before the fruit has properly ripened, demanding an interval of time more or less prolonged on a shelf in a warm structure, so as to aid this chequered progress of ripeness. For this reason, probably, more than any other, the character of late Melons stands low; they fill a place usefully as an ornament, when there is an ample supply of other fruits more tempting in their quality for actual dessert use. At Longleat the houses are light, well heated, and roomy, and soil so well furnished for Melon requirements that, I am told, nothing need be added to improve it; but even given all these good accessories, fine Melons in November are rendered none the less praiseworthy from a grower's or consumer's point of view.—W. S.

Forced Pot Vines.

When the buds break, the temperature will need to be increased by 60deg at night in mild weather, and 55deg when severe, gradually increasing it so as to have it 60deg at night when the Vines are in leaf, and from 65deg to 75deg by day, with moderate ventilation. Sprinkle the floors and surfaces of borders or beds twice or thrice a day in clear weather, avoiding too close and damp, or too damp or too dry an atmosphere. Afford liquid manure whenever moisture is required at the roots, always supplying it at the mean temperature of the house, or that of fermenting material, about the pots, being careful not to make the soil sodden and sour by needless supplies. Disbudding must not be practised until the bunches show in the points of the shoots, as any extra growth goes towards increasing the activity at the roots.—VITIS.

Cherry House.

The house containing trees for supplying ripe Cherries from the middle of April onwards must now be closed. Be sparing of fire heat at the commencement, not applying it unless absolutely necessary to maintain the temperature at from 35deg to 40deg at night, and 40deg to 45deg by day, ventilating when the temperature is about 50deg to 55deg. Close the house at 50deg. Syringe the trees early on fine afternoons, so as to admit of the buds becoming fairly dry before dark. The house will also need damping in the morning and afternoon of fine days, occasionally only in dull weather. The border will be sufficiently moist for some time through the removal of the roof lights; if not, it must have water to bring it into a thoroughly moist state. Trees in pots, if at all dry, will require repeated supplies of water to secure the thorough moistening of the soil down to the base of the pots.—G. A.

Fruit Growing in Queensland.

The Minister for Agriculture in Queensland, desirous of assisting fruit growers in his State by establishing new markets, has bought up the whole of the season's crop of "Cape Gooseberries," a fruit which makes a delicious preserve, for pulping; and inquiries are being made in Great Britain as to the feasibility of establishing an export trade in this article on payable terms. Cape Gooseberry jam can be purchased in London, and as a table delicacy it would, were it generally known, be greatly appreciated. The Queensland Agricultural Department is also thinking of trying an experimental shipment of Pineapples to London, in order to test the transit question thoroughly. Pineapples are produced in Queensland as freely as Apples are here. In the Brisbane district alone close on 200,000 dozen are grown yearly, and all over the State these delicious fruits are cultivated, and are an ordinary item of dietary. If shipped to this country, it would be on a commercial basis, and the fruit would be sold cheaply.

Bananas are produced in Queensland in enormous numbers; the average annual crop may be put at about 2,000,000 bunches; and taking, say, 120 "fingers" to a bunch, we get the estimated yield of single Bananas in Queensland for a year as 240,000,000! Bananas flourish everywhere on the coast lands, and many small settlers make a decent living by taking up virgin scrub at £1 an acre and growing Bananas thereon after clearing. The Banana has the virtue of bearing all the year round, in congenial conditions.

Mangoes are grown in Queensland with such ease that, in good seasons, the local demand is unable to deal with the output; 1902 was a bad year for Mangoes, but in 1901 some 350,000 dozen Mangoes were grown in the State. After some hesitation in taking to this fine fruit when it was introduced, about twenty years ago, Queenslanders now regard it as a commonplace, and, raw and preserved, it is eaten all over the State. Oranges suffered from last year's drought, but their cultivation in normal seasons is an important section of the fruit department; about 20,000,000 Oranges were grown in 1901. There is a large export trade in all these fruits mentioned to the Southern States of Australia, Queensland being the supplier of all the tropical and sub-tropical fruits to Australasia. The area of Queensland is so extensive (669,000 square miles), and the climate so varied, that in one part or another every known fruit flourishes. Cocoa-nuts are grown on the islands which fringe the northern coasts in great numbers.—N. Q. H.

Pear, Bergamotte Esperen.

After the voluminous correspondence in our columns during April and May, 1901, on the merits of this Pear consequent upon the Council of the Royal Horticultural Society refusing to uphold the award of merit recommended by the Fruit Committee about that period, it will be unnecessary to say much of this variety now. Bergamotte Esperen is an excellent Pear where it succeeds, but some growers, i.e., those on cold soils, do not find it ripen well, or to produce good eating fruit. As a wall-cordon in warm soils it, however, produces fine-grained, melting sugar fruits, and bears very freely. Our illustration shows its character in this respect, and the fruits are each of a roundish form, 3ins broad and as deep. It comes in after Winter Nelis, lasting in use for dessert from February till April. "As it bears in clusters, the fruits should be carefully thinned."

Packing for Export.

The barrel most commonly used in Nova Scotia is made of Fir staves and Birch hoops, holding about 140lb of fruit, and costing 10d. Barrels with staves of Maple or Elm with Elm hoops are used to a lesser extent, but are commonly used in Ontario, Upper Canada, and the United States. These hold about 150lb of Apples and cost 1s.

In packing, the bottom and bilge hoops are first nailed, then a thin layer of wood wool called "Excelsior," is placed at the bottom, next a sheet of white paper the same size as the end of the barrel. A layer of "headers" is then laid; these are Apples of average size, those best coloured being chosen. These are placed stem downwards. The barrel is then filled by carefully emptying in the fruit, using hinge-handled baskets. The barrel is gently shaken each time fruit is added, so as to pack the fruit closely. It is filled 1in to 2in above the rim. In order to get the Apples tightly packed so that they do not move after packing and become "slack" in travelling, a round board lined with sack-ing or saddler's felt is placed, padded side downwards, on the top of the Apples; the barrel is rocked on the floor if of cement, or if not, on a heavy plank. The Apples thus shaken and pressed sink to about the level of the rim; any spaces are filled with small Apples, then another piece of white paper is placed on the Apples; then the lid is laid on, and the screw or lever press is applied to the barrel to press the lid into position; followed by the tightening of the chime hoops and nailing of the heads and hoops together with the owner's name and address, are stencilled on the top of the barrel; the name of the salesman on the bottom.

R.H.S., Scientific Committee (Sept. 15.)

Violets diseased.—Mr. Worsley showed specimens which Dr. Cooke pronounced to be attacked by *Urocytis violæ*, recently figured in Journal R.H.S., "Pests of the Flower Garden," plate I., fig. 19.

Longevity of Fern spores.—A communication was received from Mr. H. Coleby, Wargrave, describing an instance of a piece of a stem of a *Dicksonia*, possibly twenty years old, on which, when broken off and kept moist, seedlings of *Gymnogramma aurea* began to appear. It was suggested that the spores of the latter had lain dormant for that length of time. Mr. Druery contributed the following note: "I have raised Ferns from spores seven to eight years old. The conditions mentioned by Mr. Coleby strike me as being exactly such as to maintain the power of germination for a very long time—i.e., absence of stimulating moisture or warmth. I have no doubt that the Fern arose from dormant spores. It is remarkable that only one kind of Fern germinated, though we must assume that other Fern spores were present in the old *Dicksonia* stem." It was suggested, however, that the *Dicksonia* stem might have been previously utilised for growing only the *Gymnogramma*.

Ash-wood with grubs.—Specimens were received from Mr. J. Gregory, Croydon, with live grubs two years after the tree had been cut down. The wood outwardly showed no signs, but on being sawn asunder both dead and living grubs were frequently found. Mr. Saunders contributed the following observations: "The insects found in the Ash timber are beetles belonging to the family of Longicorns, and to the genus *Clytus*; but not being an English species, and



Pear, Bergamotte Esperen.

probably American, I have not yet been able to obtain the specific name. The grubs of these beetles are sometimes very long-lived, and they remain for years in wood where their presence is quite unsuspected. A specimen of Longicorn beetle has been known to emerge from furniture, the wood of which was felled twenty-eight years previously. It is now supposed that the grubs which take such a long time in undergoing their metamorphoses have been hatched from eggs which were laid in a tree which had just been felled, or was cut down shortly afterwards, so that the grub was soon obliged to feed on very dry wood from which it obtained but little nourishment."

Albinism in Shirley Poppies.—A communication was received from Mr. J. Bidgood, of which the following is a brief abstract. It will appear in full in the Journal of the R.H.S. He would recognise four forms of albinism in flowers—viz., incomplete, complete, partial, and local. After giving illustrations of the first three from Orchids, the last applies to Poppies. The original plant of the Shirleys had a white edging to the petals. It was evident, therefore, that this plant had a tendency towards albinism. The black blotch has disappeared from all Mr. Wilks' stock, being replaced by white. Other growers have experienced reversion to the black blotch. This is caused by a very strong solution of a dark red pigment contained in the epidermal cells on each surface of the petal; the usual cause of blacks being dark red overlying green, as on the leaves of *Arum maculatum*. The colour in the outer portion of the petals was also in the epidermal cells. On applying micro-chemical tests the behaviour of the colours of the two regions in question was very different. Strong sulphuric acid changed the black blotch to pink, brick-red, orange. the outer part the same, but passed on to yellow, finally disappearing. Iodine in potassium iodide changed the blotch to port wine colour; the outer part slowly faded. Solution of caustic potash changed the blotch to a deep blue, then faded out; the outer part to greenish-yellow, then faded out. Neither of the pigments shows the typical reactions of the cyanic series, and still less of the xanthic.

Supertuberation in Potatoes.—The following communication was received from Mr. F. C. Davidson, Wickham Bishops, Essex:—"M. N. Bernard propounded the theory, in 'Rev. Gen. de Bot.' that tuberisation was due to a fungus; and had found it in the Potato; by experiments there was a relation between the date of infection of the soil and the date of tuberisation. I would suggest a practical application of this theory." Referring to Dr. B. Dyer and Mr. Shrivell's paper on "Manuring Market Garden Crops" (Journal R.H.S., xxvii., p. 995) he observes—"That whereas such crops as Cabbages may be grown as well with artificial manure as with dung, indeed, it would seem better and far more economically; yet, this does not hold true of root crops, especially of Potatoes. For instance, in the early varieties the average crop for some years was—from 50 loads of dung, 7 tons 7 cwt.; from 25 loads, 5 tons 14 cwt.; from (no dung) phosphates and 4 cwt. of nitrate of soda, 3 tons 6 cwt.; and from the same, with potash, 4 tons 10 cwt. The gap here, though potash fills it up a little, is most striking. If dung be favourable to bacteria they may infest the soil and promote tuberisation. If this conjecture prove to be a fact, it might have a very great influence on the cultivation of root crops."

Trees and Shrubs.

The Black Poplar and the Aspen.

These are quick-growing trees, with light-coloured foliage, and they are effective with a background of dark-leaved Conifers. They are, therefore, well worth consideration at this season. It is quite true that these two Poplars usually grow largest in moist soils, but they are cosmopolitan; they will thrive in almost any climate and any soil. We have seen both of them growing as large and as handsomely formed on a dry calcareous soil as the Black Poplar represented in the accompanying engraving. One may easily discern without any danger of being deceived which is an Aspen, not only by its leaves, but more certainly still by its inflorescence. The leaves of the Aspen are roundish ovate, the edge slightly wavy and toothed, downy when young, but quite smooth when full grown. The leaves of the Black Poplar are deltoid-pointed, toothed, with glands at the base of the teeth, and always smooth on both surfaces. We add a few notes relative to each species.

Populus tremula, the Trembling-leaved Poplar or Aspen, is a native of most parts of the British Islands, and is described by all our earliest herbalists, but by none in such scandalous terms as by old Gerard, all of whose female relatives must have been scolds. He says it "may be called Tremble, considering it is the matter whereof women's tongues were made, which seldom cease wagging." The continuous tremulous motion of the leaves arises from the even balancing of their discs, and the length and slenderness of their footstalks. Its popular name is derived from the Anglo-Saxon, and refers to that motion. *Æpse* was its Anglo-Saxon name, and the same word is in that language synonymous with our "tremulous." Superstition has given birth to a legend, at one time prevalent in the Highlands of Scotland, and thus told by Mrs. Hemans. The Cross—

Was form'd of aspen wood; and since that hour
Through all its race the pale tree hath sent down
A thrilling consciousness, a secret awe,
Making them tremulous, when not a breeze
Disturbs the airy thistle-down or shakes
The light lines of the shining gossamer.

In dry soils it does not attain a greater height than 50ft, but in moist situations it is often full 80ft high. It is not a long-lived tree, usually beginning to decay when seventy years old, and this, with its tendency to produce numerous suckers, renders it not desirable for ornamental planting near a lawn or flower borders. The wood is white, soft, and light, and is used by the turner for forming bowls, trays, and other utensils. It was so valued for making arrows that in the reign of Edward IV., 1464, a statute was enacted from which the following is extracted:

"Patten makers may make pattens of such Asp as is not fit for shafts.

"Asp timber is the best and lightest timber, thereof to make pattens and clogs, most easy for the wearing of all estates, gentiles, and other people, of any timber that groweth.

"Turners, carpenters, woodmongers, and cole-makers do occupy, expend, and waste yearly in their occupations a great quantity of all manner timber of Asp."

Populus nigra, the Black Poplar, probably so called because of its darker tints than those of the White Poplar. Its bark is brown, and the leaves have no white down on their under surface. It attains a height of 80ft, and its wood is one of the best for making turnery ware. It has been much used for flooring, and Mr. Young tells that it is so slow in taking fire that the flames were stayed at that part of a building on fire constructed of this wood. It affords pasturage for bees, both by its catkins and the honeydew which is freely secreted on its leaves.

Societies.

Bristol: "Greenhouse Climbers."

The Bristol Gardeners' Society met at St. John's Rooms on Thursday evening last, and Mr. E. Poole, F.R.H.S., presided over a good attendance. The lecturer for the evening was Mr. Orchard, of Henbury, his subject being "Greenhouse Climbers." He named a selection of climbers suitable for the greenhouse, detailing the cultural directions for each in a masterly way. He emphasised the necessity for cleanliness, keeping down insect pests, which, if left, would cause a great amount of trouble. He advised gardeners to study their employers' tastes in the selection of greenhouse and other climbers. A good discussion followed, and he was unanimously accorded the best thanks of the Society. The prizes for the evening were for two bunches white Grapes, and were awarded to Mr. J. B. Brain (gr. Mr. Atwell) and Mr.

Howel Davis (gr. Mr. Curtis). Certificates of Merit went to Mr. W. E. George (gr. Mr. Scott) for 3 well-grown plants of *Begonia Gloire de Lorraine*, and to Mr. F. C. J. Fisher (gr. Mr. Shelton) also for a large plant of the same, and one to Lady Cave (gr. Mr. Poole) for a collection of cut foliage of greenhouse climbers. The Society's annual dinner takes place at St. Stephen's Restaurant to-night, November 17.

Sheffield: "Plant Life in the Alps."

At the monthly general meeting of the Sheffield Chrysanthemum Society, Professor Denny gave an interesting lecture on "Plant Life in the Alps." After explaining and illustrating the laws and structure relating to the growth of plants living at or about the sea level, the lecturer drew some interesting comparisons of plant life in the Alps. From the base to the summit of Mont Blanc plant life altered in degree according to the change in climatic conditions. Illustrations were given, showing tall and symmetrical trees growing at the base of a mountain. On the top of a mountain plants were subjected to great heat from the sun during the day, and to intense cold at night. Plants on the sea level were not affected by such extreme climatic influences. As the cold was supreme longer than the heat, the portion of the plant above ground was reduced in proportion to the height, until the highest forms were mere dwarfs. Where there was perpetual snow, plants were scarce. The Alps proper were the middle regions where pasture land existed, at any rate during the summer months. Though leaf development was not apart from the growth of root, the altered climatic conditions caused a stunted growth above the surface, while the hidden part of the plant developed to what seemed undue proportions in the endeavour to find warmth.

Exposure to wind also hindered the growth of the plant above the surface. The leaf and flower, though not possessing long stalks, grew in thick clusters and wholly covered the surface of large areas. By this means warmth was retained in the soil and cold was kept out. Water was necessary, but, if the plants were not able to drink, they might as well be in a desert. Neither too little nor too much was congenial to the plant, and some Alpine plants had a covering of hair, which regulated the passage of water and the radiation of heat. Many interesting conditions suitable to the life of Alpine plants were explained by the lecturer. An important feature was the perpetuity of the Alpine flora which has the agency of insects for fertilisation only in a small degree. Perpetuity depended upon the seeds and the taking root of the leaves which clustered close to the surface. Falling leaves resting in crevices formed a large part of the perpetuity of the plant. Referring to the bright colours of the flowers that grow on the Alps, the lecturer remarked that practically the only insects flying to these heights were the bee and the butterfly, the latter being able to get much higher. It had been proved by naturalists that the favourite colour of the bee was blue, and the colours that attracted the butterfly purple, red, or pink. These preferences by Alpine fertilisers accounted for the almost exclusive colours of blue, purple, red, and pink, among flowers on the heights. Insects at a lower plane had preferences, as yellow for beetles, white for flies. The butterflies were, therefore, responsible for the preponderance of the gay colours of the higher Alps. Other interesting points, such as the penetration of snow and ice by the warmth generated in the growing flower, concluded a highly interesting lecture.

Devon and Exeter: Stove Plants.

At the Exeter Guildhall on December 16 a good attendance of the members of the Devon and Exeter Gardeners' Association assembled to hear a paper on "Stove Plants," read by Mr. Curtis, of Bristol. The chair was occupied by Mr. J. Coutts, of Killerton Park, who, in introducing the lecturer, spoke of the excellent fraternal feeling which was engendered by the interchange of lecturers with the Bristol Gardeners' Society, as in the present instance. The lecturer said he was deeply interested in stove-reared plants, and confessed there was no other branch of gardening that claimed his attention more. The great secret in the successful culture is cleanliness. The flowers when expanded disliked syringing, and soon turned yellow when so treated, the buds dropping off. Foliage plants next claimed the lecturer's attention. The Croton, he thought, had most attraction for us, probably on account of its variety and deepness of colour. The essential in the cultivation of this novel plant was to get the leaves to curl in a perfect manner from axil to tip, at the same time having a well-coloured tone. Good drainage and fair amount of sunshine were the chief factors in gaining this. Crotons should not be excited at any period of their growth.

Voting for the best pot of *Cyclamen persicum* in blossom resulted in Mr. J. Rogers, of Marl House, winning with 87 points; Mr. G. Cole being 2nd, 57 points; Mr. Cork, 3rd, 41 points. Among the flowers exhibited were some remarkable spikes of *Calanthe Veitchii*, of a bright rosy pink, and with a great many flowers on the spike. A new Chrysanthemum from

Messrs. Veitch's nursery, said to be a sport from Madame R. Cadbury, was a very large, finely finished flower of a deep golden colour, the petals very broad and thick, thus partaking of the character of its parent. It has the further advantage of not damping off. The variety is not yet named. A beautiful white variegated Borecole named "The Albino" was also shown.

Cardiff: Bees.

CARDIFF GARDENERS' ASSOCIATION.—At a meeting held at the Grand Hotel on Tuesday, December 15 (Mr. H. R. Farmer in the chair), Mr. W. Richards delivered a lecture entitled "Bees as Fertilisers, Florists, and Fruit Producers," illustrated by a series of slides. The lecture was thoroughly a botanical and educational one, for flowers and fruits were represented in their various stages before and after fertilisation, showing the result of the work of bees. The best thanks of the meeting were accorded Mr. Richards for his much appreciated lecture.—J. JULIAN.

Dublin Seed and Nurserymen's Employés' Association.

On Saturday, December 12, at the Gresham Hotel, Dublin, the above newly-formed Association held an inaugural dinner. There was a large attendance, and the chair was occupied by Mr. A. J. Sinclair, who was supported by F. W. Burbidge, M.A., V.M.H., &c., on the right, and Mr. D. McLeod, of Messrs. W. Drummond and Sons, Ltd., on the left. Mr. Burbidge proposed the toast of the Dublin Seed and Nursery Employés' Association. He was glad, he said, to see the junior members were so strongly in evidence, and thought the Association was bound to succeed. Mr. Hall, in response, said if there was anyone in Dublin who should recognise the value of that society it was the employers. In the seed trade they had much to learn, as nothing could be left to chance. He thanked them for responding so heartily to the toast.

Mr. Joseph Alexander Rochfort, in proposing the toast of "The Seed and Nursery Trades," said he was very sorry that they could not use the word profession instead of trades when referring to these businesses. He was of opinion, owing to its difficult and detailed nature and the amount of study one had to go through to be proficient, that it ought to rank as a profession (applause), or at least be brought up to a standard similar to the Pharmaceutical Society, which had an Act of Parliament to protect it. The seed and nursery trades were to his mind the closest allies the Department of Agriculture could have in working out their schemes for the improvement of agriculture in Ireland, to say nothing of reafforesting.

Mr. D. MacLeod, in reply, said he regretted the absence of their venerable president (Mr. David Drummond, J.P.), owing to the weight of years. Being on the verge of ninety, they could hardly expect him to be with them. He impressed on the young men the importance of fitting themselves for a higher sphere of labour, by doing more than the mere mechanical work at which they were employed. If they did this, they would qualify themselves for better and higher positions in the future. He hoped that before long that Association would have a domicile of its own, and in that domicile he hoped to see established as an aid to improvement, a library of books of reference on botany, and other kindred subjects that will qualify the young men to take a noble part in the useful sphere in which they are placed in this country, or in any country. He should also like to see there specimens of various plants, including weeds, so that those who studied would know where they grew, and all about them. As to the heads of the seed and nursery trade in Dublin aiding the Association, he was sure that he might safely say that they would not be backward in coming forward. The firm with which he had the honour to be intimately identified, would, he was sure, gladly give whatever support they could, and encourage the Association in

every possible way. Mr. J. W. Henderson proposed "Our Guests," to which Mr. Walter Keatinge, secretary of the Royal Horticultural Society of Ireland, replied. Other toasts followed, the proceedings concluding with the singing of "Auld Lang Syne." The hon. sec. of this Association is Mr. Jas. McDonough, of Sir Jas. Mackey's.

Newport (Mon.): Six Good Vegetables.

NEWPORT (MON.) GARDENERS' ASSOCIATION.—The members of this association held their usual meeting on Wednesday, December 9, when Mr. J. Lee, member of the Bristol Gardeners' Association, read a very able paper on "Six Good Vegetables." Mr. Lee had been ordered by his association not to include in his paper such vegetables as Onions, Cauliflowers, Peas, Beans, Celery, &c., so the six he had selected were Potatoes, Cabbages, Vegetable Marrows, Turnips, out of doors Tomatoes, and Rhubarb. Early supplies of Potatoes are much appreciated, so Mr. Lee gave instructions how to grow these, more especially growing them in 10in pots on shelves in a greenhouse, also in pit sand frames on hotbeds. The variety he found to do best for this work was Sharpe's Victor.

Cabbages were next dealt with, and the sort he recommended for the earliest was Ellam's Early, being much appreciated in early spring. Directions were given for growing



The Black Poplar. (See page 588.)

Vegetable Marrows in pots for the earliest supplies, and out of doors for the later. Turnips taxed the skill of the gardener to have them in good condition all the year round, especially during the hot months. Tomatoes: Sow in March for outside work, grow them on to have them strong for planting out early in June. Rhubarb was much appreciated from Christmas until Gooseberries were fit for use, and Mr. Lee gave instructions for growing and forcing, so as to keep up a succession. A good discussion followed, in which Messrs. Harris, Basham, Jones, Powell, Woodward, and Daniels took part. A very hearty vote of thanks was accorded Mr. Lee for his very able and instructive paper. Mr. J. Duff presided over a good attendance.—J. PEGLER.

Birmingham: Vine Culture.

BIRMINGHAM GARDENERS' ASSOCIATION.—An interesting and instructive lecture was afforded by Mr. Robert Cock, Horticultural Lecturer to the Staffordshire County Council, on the 14th inst., on "Vine Culture." Among a select list of the best varieties he particularly mentioned the Muscat Hamburgh and Muscat of Alexandria as the best flavoured Grapes extant, the former not excelled by the latter kind. In the construction of Vine borders inside or outside, Mr. Cock strongly disapproves the adoption of brick walls and concrete floors, unless the natural surrounding soil should be of an unfavourable nature and the substrata excessively cold. Thoroughly consolidated borders (the surface especially) were advocated for inducing a freer root-action in the upper portion of the border. For interior borders, paving the surface with ordinary clay bricks, about 2in apart, with a view to conserve moisture and heat, thereby acting as a medium for attracting the roots towards the surface, was advised. In the formation of Vine borders, while advocating incorporation of old mortar rubble in the compost, Mr. Cock's experience led him to eschew that of old chimneys. He omitted however, to define the reason, excepting that he had known instances where the roots of newly planted Vines had absolutely refused to grow in such a medium, and that the whole of the border had to be replenished by a new one. It would be interesting to learn the experience of other cultivators regarding the matter in question, and whether the mortar rubble obtained from factory or dwelling-house chimneys alone possessed any distinctive chemical property inimical to Grape Vines or any other plant-root growth.

Horticultural Club: Scented Flowers.

The monthly dinner of this club on the 15th inst. was followed by a most interesting joint paper by Mr. G. Bunyard and Mr. Jas. O'Brien on "Scented Inconspicuous Flowers." Mr. O'Brien naturally treated of the Orchid tribe, while Mr. Bunyard's remarks were of a more general character. With regard to the human faculty of appreciating odours, it was generally felt that man is little qualified to judge for the insect, or even the animal world, since, as Mr. Engleheart pointed out, it was impossible to form a scale of odours in the same way as we can of musical sounds or optical colours, and it is quite possible, and indeed more than probable, that while our eyes and ears are limited in their scope to certain ranges of audible vibrations, or a limited area of the spectrum, insect organs may be capable of appreciating, at any rate, sounds which are too subtle for our senses, and their olfactory nerves may also be so differently constituted as to be sensible of subtle scents beyond our ken. The case of rare moths in captivity attracting those of their kind for long distances was cited as an example by Mr. Druery, and while Mr. Charles Pearson considered that this attraction might be due to extremely high pitched sounds emitted by the captives, Mr. Engleheart quoted an instance in support of Mr. Druery's contention, which indicated the attraction of certain moths whose only habitat was seven miles distant.

Applying this to flowers, it is conceivable that inodorous ones to man, may nevertheless yet attract the needful insects by scent. The curious fact of certain recognised odours being common, not merely to flowers of quite different species, but even to animals and minerals, was brought forward, the pungent odour of the Onion being perceptible not only in other plants but also in the small snail, *Helix alliaria*, and in vaporised arsenic. Allusion may also be made to the singular cases of flowers with, to man, the most repulsive odours, attracting carrion flies in large numbers with the result that they laid their eggs in profusion upon such flowers, though these eggs were destined to perish since no real food, such as was suggested by the odour, existed for the future brood.

Some of the *Stapelias* possess this peculiarity, and Mr. Druery suggested the possibility of such plants being allied to carnivorous ones, the added eggs acting as nutritives. The subtle nature of odours was also indicated, the musk glands of animals having the power for many years, not only of retaining their peculiar scent, but of imparting it perceptibly to the surrounding air and adjacent articles without any appreciable decrease in substance or weight.

Referring to the innumerable odours of the foliage apart from flowers, it was mentioned that such emanations had been

regarded as the throwing off of useless materials. This view, however, could hardly be justified, since there was undoubted evidence that in some cases these odours exercised a deterrent effect upon verminous foes. Both papers teemed with examples of curious relations between scent and inconspicuousness, while on the other hand it was pointed out that many very conspicuous ones had, as it were, two strings to their bow, being fully as odoriferous as their humbler relatives.

Isle of Wight: Tomato Culture.

The monthly meeting of this horticultural association was held at the Warburton Hotel, Newport, on Saturday, December 5, Dr. J. Grove in the chair. Considering the inclemency of the weather there was a good attendance of members. The subject for the meeting was a paper read by Mr. E. C. Goble, of the Walcot Nurseries, Ryde, "On the Cultivation of Tomatoes." Mr. Goble is a large grower of Tomato, annually placing on the market tons of fruits, and has probably the largest glass structures in the island devoted exclusively to their culture. He said Ham Green and Chemin were good old varieties, while of newer introduction Up-to-Date was one of the best. Mr. Goble holds an opinion that the supply of these fruit somewhat exceeds the demand, so that it is sometimes difficult to dispose of produce at remunerative rates. The exhibit included a fine dish of tubers of the famed Northern Star Potato. From 6ozs of seed sets Mr. Bound, Freshwater, had secured 69lbs. Sutton's new Potato, Discovery, was also shown. Mr. Kime, Westhill, Yarmouth, showed a lovely Zonal Geranium, Mrs. Martin, of a lovely salmon pink shade. The annual meeting will be held on January 9.

Ipswich: The Carnation.

IPSWICH MUTUAL IMPROVEMENT SOCIETY.—The year's work was brought to a successful conclusion on Thursday, the 17th inst., when Mr. R. Dean, V.M.H., gave a lecture on "The Carnation: its Types, Culture, and Uses." Happy recollections of a previous visit from Mr. Dean evidently conduced to the large attendance. By way of introduction the essayist first referred to the popularity of the flower, and then to its early history. The development of the old florists' Carnations and Picotees and their classification into various types was then treated at considerable length, and followed with evident interest by his audience. Mr. Dean then passed on to the consideration of the present day forms of border Carnations, likewise the Malmaison and Winter or Tree flowering varieties. Details of cultivation were given for all sections, as well as notes on the insect and fungoid pests to which the plants are subject. In the discussion which followed, Messrs. Messenger, Creek, Morgan, Bullard, and Finlay took a prominent part, the proceedings closing with a hearty vote of thanks to the essayist.—E. C.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
December.		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
Sunday ...13	E.S.E.	deg.	deg.	deg.	deg.	Ins.	deg.	deg.	deg.	deg.
Monday ...14	S.E.	44.7	44.4	50.3	37.5	—	42.8	44.6	47.3	27.0
Tuesday...15	S.E.	41.9	40.3	45.3	39.0	—	42.1	44.5	47.3	25.5
Wed'sday 16	E.N.E.	41.1	39.1	43.6	40.2	—	42.0	44.5	47.2	32.5
Thursday 17	E.S.E.	40.5	39.6	45.3	37.5	—	42.0	44.4	47.2	27.3
Friday ...18	E.S.E.	41.7	41.2	44.8	40.2	0.03	42.7	44.4	47.2	28.3
Saturday 19	E.	42.0	40.2	43.3	41.2	—	42.9	44.6	47.1	39.0
MEANS ...		42.6	41.2	46.2	39.4	Total. 0.03	42.2	44.5	47.2	31.0

The weather during the past week has been fair, but very dull and dark.

KENT FRUIT-GROWERS' ANXIETY.—Fruit-growers in Kent are anxious with regard to the prospect of next year's Black Currant crop owing to the continued ravages of the pest *Phytoptus ribis*, known to farmers as the bud mite. It attacks the wood as well as the buds of the plants, and acres of plantations have been affected. The pest has been spreading in the Hop country for the past seven years, and so far no cure has been found, although several methods of treatment check it to some extent.

Young Gardeners' Domain.

The Editor welcomes short letters from under gardeners. Letters should be confined to 500 words in length, should be written only on one side of the paper, as clearly as possible, with one inch space at both top and bottom, as well as at the sides. The names and addresses of the writers must accompany all communications, not necessarily for publication, but as a guarantee of good faith. If these points are not respected, the letters cannot be considered.

The Stephanotis in an Intermediate House.

The Stephanotis will thrive well in an intermediate house. I know of many that do, and even if a little later in their blooming, they are excellent in every respect. If grown in the latter temperature, they do not require too shady a place, and scarcely so much water. Mealy bug is the great enemy. This, with the many valuable fumigating compounds and insecticides, is easily exterminated in the early stages. Once let it get a firm hold, and a year's attention is soon gone—R. P.

Greenhouse Lachenalias.

These free-flowering greenhouse bulbs give a grand display during the spring months, whether grown in pots, as an edging to the stages, or in wire baskets suspended from the roof, the latter method being very effective. Natives of South Africa, it is essential to their well doing that after the flowering period the bulbs receive a thorough ripening, placing them in as sunny a position as possible. About the middle of August shake out the bulbs from the old soil, and prepare a compost consisting of about two parts of loam and one of leaf soil, together with a liberal addition of coarse sand or lime rubble, and a sprinkling of finely-sifted dried cow or sheep manure, aiming to keep mixture as porous as possible.

If they are to be grown in pots, five-inch size will be found suitable, having them well crocked and clean, placing five or six bulbs in a pot, selecting the bulbs for each pot as evenly as possible. If, however, they are to be grown in baskets, have them well lined with fresh moss, in the bottom of which put a fine layer of soil, and place some of the bulbs upside down at a distance of about 3in apart, and gradually work up the sides, finishing on the surface, and just covering them with soil. Place them in a cool, shaded house, and syringe to keep them moist, but apply water carefully until growth becomes more advanced, when it can be more liberally given.

When the flower spikes begin to show, give some weak application of an approved fertiliser once or twice a week, but avoid pouring it into the axils of the leaves, or the spikes will probably decay. At this period a slightly warmer situation will help to bring up the flowers, but as long as the night temperature does not fall much below 40deg Fahr., they will take no harm. The two varieties most commonly met with are *L. tricolor* and *L. Nelsoni*, of which I prefer the latter.—JOURNEYMAN.

The Bee-keeper.

Reply to "X. Y. Z."—The hornet is larger than the wasp, and may be distinguished from the British species of the latter by its reddish tint, and red spots on the sides of the abdomen. It generally builds its nest in trees. Queen wasps (the females proper) have stings. They are larger than the males, or workers, sometimes equal in weight to six of the workers, and produce both males and females. The smaller females lay only drone eggs. The queen bee also has a sting, which is used principally against rivals. It is similar in structure but curved and longer than that of the worker, with from three to five very small barbs. The poison sac contains only a milky substance entirely different to the venom of the worker.

Trade Note.

Messrs. Cooper, Taber and Co., Limited, wholesale seedsmen, issue the following notice:—"In consequence of the exceptionally wet and sunless season, seeds generally have again been indifferently ripened and harvested, and many samples of Peas and Beans are somewhat stained. We therefore, beg our friends to unpack all goods immediately on arrival, and to recommend their customers to sow more thickly than usual."

Trade Catalogues Received.

James Carter and Co., 237, High Holborn, London.—*Practical Gardener and Seeds for the Garden.*

Cooper, Taber, and Co., Ltd., 90 and 92, Southwark Street, London, S.E.—*Wholesale Seed.*

Dicksons, Chester.—*Vegetable and Flower Seeds.*

Samuel Dobie and Son, Heathfield Gardens, near Chester.—*Amateurs' Garden Annual for 1904.*

John Peed and Son, West Norwood, London, S.E.—*Chrysanthemum Novelties, Winter-flowering Begonias.*



Hardy Fruit Garden.

PRUNING BUSH FRUIT TREES.—Large trained bush trees of Apples and Pears require but simple treatment in pruning, because as a rule the number and position of the branches are and have been fixed for some time. Trees long established, however, and sometimes when only recently formed and trained, may possess too many branches, or rather they are crowded, having in the first instance been originated too closely together. This has an important bearing on the continued fruitfulness of trees, and should as far as possible be rectified, so that each branch has a fair share of light and air. The best distance is from a foot to 15in, much depending on the size of the clumps of spurs. These must also be reduced in size and number if crowded, shortening those parts extending too far from the main branch. In shortening the current year's shoots leave as a rule two buds. The leading shoots must receive treatment in accordance with their development. If there is still further room for extension, shorten to one-third, otherwise the leading growths must be cut closely in. Weak growths and sappy growths cut out entirely, as well as any spray tending to choke the interior.

OPEN BUSH TREES.—Sometimes trees are grown in a less formal way, and are termed open bush trees. They have their branches disposed thinly, and the side shoots are more encouraged to form fruit buds than extend into growth. Those that do the latter must be shortened to form spurs. Shorten the unripe tips of leaders.

PRUNING PYRAMID TREES.—Pears are best adapted for this form of training, which entails the growths being restricted. The branches should be disposed at equal distances all round the tree, the lower, of course, being the longest. Shorten the side growths to two or three buds, and the leading growths of each branch must also be pruned closely back except where further extension is needed, when only shorten to ripe wood.

PRUNING STANDARD TREES.—Severe pruning of standard fruit trees is not desirable. If well cultivated from the first, and the branches originated in the best form, there should be little or no pruning, especially with Plums and Cherries. The lines, however, on which pruning should be done consist of thinning-out branches or shoots where crowded. Trees that have been neglected for some time will, of course, require most attention. The crowded interiors ought first to be dealt with, removing crossing and interlacing branches. Spray which starts from the old wood must also be cleared out. Avoid shortening back branches. Those which need removal must be cut out to the main. Leave no snags, and cut out dead wood.

RASPBERRIES.—The Raspberry quarters may be pruned and put into order. Many cultivators do not leave the pruning out of the old bearing canes until the winter season, but remove them immediately the fruit has been gathered. This is good practice, because it enables the current year's canes, which will be the future bearing canes, to become thoroughly well ripened, much more so than if they had been crowded among useless growth throughout the autumn. Even in these cases where the principal pruning has been done, there will still be weakly canes requiring removing. Leave the strongest and best ripened canes, limiting the number to five or six for each stool. The canes may be left their full length now, shortening them in spring to ripe wood, or to the tops of the stakes or trellis. New stock may be planted now in lines 5ft apart, or in clumps 3ft apart. Suitable plants for the purpose may be found among the clumps and between the rows, choosing those of comparatively slender rather than stout growth. The former will be found to have the best system of roots, these being of a fibrous character, hence more readily taking hold of the soil. The pruning of newly planted canes need not be attempted until spring, but when doing so cut down the canes close to the ground.

LOGANBERRIES AND BLACKBERRIES.—Well established plants will have produced long and strong growths. Select the ripest of them, and train to trellises, wires, or stakes. Remove the unripe ends. Cut out weakly growth and spray. In planting young stock place the suckers 5ft apart in deeply dug and well enriched ground. They may be cut closely down to the ground the first season, like Raspberries, so as to encourage the production of strong canes the following season, and which, becoming well ripened, will bear freely the suc-

ceeding summer. Established quarters will be greatly benefited by a liberal mulching of manure.

JAPANESE WINEBERRIES.—A plantation of this hardy fruit-bearing shrub may be treated in pruning similar to Black Currants, cutting out shoots that have borne fruit, and leaving the current year's growths. To increase the stock divide some of the old roots, and plant in good, rich soil in a sunny position in rows 3ft apart. Mulch with littery manure for the winter, and in summer afford a liberal dressing of rotten manure, and apply liquid manure freely when the fruit is swelling.—EAST KENT.

Fruit Forcing.

PEACHES AND NECTARINES: EARLIEST HOUSE.—The trees must not be syringed after the blossoms show colour. Damp the borders in the morning and in the early part of the afternoon of fine days. Maintain the temperature at 50deg to 55deg by day, with an advance from sun heat to 60deg to 65deg, but not without ventilation at top and in front, 50deg being sufficiently high for the night. The house should be freely ventilated when the weather is favourable. Avoid cold draughts, however, but admit a little air by the top lights. Houses that have innumerable "chinks" of air may remain closed in stormy weather. The temperature must be raised early in the morning to 50deg, and then kept between that and 55deg through the day, but 55deg must not be exceeded by artificial means, nor an advance allowed above it without a free circulation of air, and it is not a good plan to close early in the afternoon at this stage. A close, moist atmosphere favours growth more than sturdy blossom, and is bad for the setting of the fruit. Under favourable conditions of the atmosphere the pollen is dispersed in a golden shower when the day is bright and ventilation has been attended to early; the setting of the fruit is then generally satisfactory, even without artificial fertilisation. The trees or trellises, however, may be shaken every day from the first pollen on a tree becoming ripe until the latest flowers thereon have cast their petals. A plume of Pampas Grass drawn over the blossoms lightly scatters the pollen, or a rabbit's tail mounted on a stick may be used similarly. A camel-hair brush passed over pollen-laden anthers and applied to the stigma of each flower is, however, the most certain method of artificial fertilisation, operating after the house has been ventilated some little time.

SECOND EARLY HOUSE.—This may be the first in some establishments, but in any case the trees, to afford ripe fruit in May or early in June, according to the variety, must be started without delay. Alexander, Duchess of Cornwall, and Early Rivers Peaches started from now to the new year will ripen the fruit in May, Hales' Early and Early Grosse Mignonne following closely; but Stirling Castle, Royal George, Noblesse, and Grosse Mignonne, started at the same time, will not ripen the fruit until June unless very hard forced, which is inadvisable. Fire heat should only be employed to keep out frost at night, and to insure 50deg by day, above which ventilate freely, and close the house at that temperature, except that a little air should be admitted constantly by the top ventilators in close-fitting houses. Bring the trees on slowly, not hurrying them in swelling the buds, and if these are abundant, rub off those on the under side or at the back of the growths. Sprinkle the trees in the morning and early afternoon of bright days only, damping the floor sufficing when the weather is dull, and only then when dry. Apply water if necessary to bring the soil into a thoroughly moist state. Outside borders must be covered with about 3in thickness of leaves and litter to prevent the soil freezing, but avoid thick and rich coverings.

SUCCESSION HOUSES.—These cannot be kept too cool after the leaves are all down, and the trees have been pruned and dressed. If the roof lights are movable they should be removed whilst the trees are at rest. The frosts are never so severe as to injure the wood of trees in good health and profitable use, and the borders become thoroughly moistened by the winter rains and snow, so that they seldom require water until the fruit is taking the first swelling and entering on the stoning process. Trees under fixed roofs seldom have the soil thoroughly moistened, therefore the buds are imperfectly formed, and are cast when they should be developing into blossom. If the roof lights are fixed, the borders must be carefully examined, and water supplied to keep the soil thoroughly moist. Dryness at the roots during the rest period is a fertile source of the buds falling, and thorough watering will not do any harm provided the drainage is effective.

UNHEATED HOUSES.—When the roof lights are removed from these directly the leaves are all down, and they remain off until the beginning of March, the trees enjoy a complete season of rest as far as possible in our climate. Up to that time, or the swelling of the buds, they are simply frost-proof, for it is not these that suffer from severe frost, but the unripe wood, and that is worse than useless, as it falls a prey to disease. Danger to the buds begins when they commence swelling, and

having burst their scales, show the downy integuments that protect the blossoms. The pruning in such cases is usually deferred until the spring, which is a light affair when the trees are grown on the long-pruning system, and the useless parts cut out directly the fruit is gathered, so that the wounds heal at once, and the winter pruning is rendered almost nil. Where the roof lights are fixed, the house must be freely ventilated in mild weather, and even on frosty or fine days. Above all things see that there is no deficiency of moisture in the border, affording a thorough supply of water when necessary.—ST. ALBANS.



**** All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.**

NATIONAL FRUIT GROWERS' FEDERATION.—The secretary is Mr. H. T. Matthews, and his address 28, Eaton Rise, Ealing, W.

DOZEN SELECT HOLLIES (F.I.).—The common Holly (*Ilex Aquifolium*) is the most generally serviceable of all Hollies. The following green forms are good. Grecian Holly (*I. A. costata*), distinct and free-growing; Donnington's (*I. A. Donningtoniensis*), distinct, of free pyramidal habit; Henderson's (*I. A. Henderson*); Hodgins' (*I. A. Hodgins*), a handsome form; Noble (*I. A. nobilis*), a vigorous-growing form; Whittington's (*I. A. Whittingtoniensis*), an elegant and distinct form, variegated; silver-edged (*I. A. argentea marginata*); Handsworth's (*I. A. Handsworthiensis*), handsome free-growing; silver-striped (*I. A. argentea elegantissima*); Golden Queen (*I. A. aurea regina*); Hodgins's Golden (*I. A. Hodginsii aurea*); Waterer's Golden (*I. A. Wateriana*), a beautiful dense dwarf plant.

FINDING CUBIC MEASUREMENTS (Working Gardener).—For the lean-to multiply the length of the house by the width, the product by the height of the front of the house, and this will give the cubical contents of the lower part. Then take the height of the back of the house, deducting from it the front height and multiplying the length by the breadth, and this by the height, divide the product by two, and the remainder, added to the product of the lower part, is the contents of the whole. For a three-quarter span proceed in the same way for the lower part, and also for the upper part, but measuring from the level of the front to the ridge of the house. These matters are difficult to explain without diagrams, which we hope to give shortly, and as for piping required for bottom heat to a propagating house, that depends entirely on the width of the propagating bed, upon which point you give no particulars. Please do so, so that we may assist you.

ROOTS FROM A BLACK HAMBURG VINE (Gardener).—The roots are infested by the white root-rot fungus, *Rosellinia necatrix*, which, fortunately, is somewhat rare in Britain, although well known on the Continent, where it attacks vineyards and orchards in a wholesale manner. The fungus is naturally a saprophyte, but acquires parasitic proclivities under certain conditions. Preventive means and remedial measures are but little understood and of no use, and when the mycelium is established in the roots cure is out of the question. The root fungi, however, succumb to treating the soil with soluble creosote solution, such as the preparations known as Little's soluble phenyle and Jeyes' fluid—one fluid ounce to a gallon of water, and treatment with a solution of formaldehyde—1oz (fluid) to a gallon of water—certainly destroys all the mycelium reached, as well as any root mites and eelworms that are not unfrequently associated with the decaying roots. If taken in time, this procedure would probably be effective, the soil being thoroughly saturated with the solution. The only injury likely to result is that of the destruction of the young rootlets. The attack of the *Rosellinia* is probably induced by the border consisting of too rich and close materials, resulting in soddenness and decay of the roots, hence the fungus is encouraged as a saprophyte. We know of no better procedure than that you are pursuing, namely, lifting the Vines, removing all the old soil, cutting away all the decayed and affected parts of the roots, promptly burning them, and relaying the roots retained in sound material of a calcareous and ferruginous nature.

ORCHIDS AT CHELTENHAM (A. H.).—Thanks, and will use notes in next issue.

CHRYSANTHEMUM BOOK (R. B.).—The matter will be considered by us, and we will let you know shortly.

CHRYSANTHEMUM ANALYSIS (Northerner).—We hope the analysis will be published in next week's issue.

ILLUSTRATION OF CACTI (W. G.).—Unfortunately the photograph had been sent to the blockmaker ere your letter reached us.

WEIGHT OF BANANA.—Your friend's bunch weighing 45lb is hardly a record weight. Mr. Jordan, gardener at Impney Hall, Droitwich, in November, 1901, cut a bunch weighing 100lb. Some of the fruits weighed 7ozs each.

DESTROYING MOSS AND OBNOXIOUS WEEDS ON LAWNS (Norhants).—As you have tried some of the advertised lawn manures, and also wood ashes, with not very satisfactory results, we fear not any substance applied at this time of year other than a good dressing of compost, consisting of thoroughly decayed vegetable matter placed in a heap for some time, and incorporated with a sixth part of lime, applying about twenty cartloads per acre, spreading evenly and leaving for the winter. In spring the rough could be raked off, stones picked, and the ground well rolled. This we have found very effective. Lawn sand, the active principle of which is sulphate of ammonia, may be applied now for destroying such broad-leaved weeds as Daisies. The mixture of nitrate of soda and sulphate of ammonia, equal parts, is as good as anything you could use, 1lb of the mixture being applied per rod (5½ square yards), commencing the dressing in March and repeating several times during the summer.

SIX OF THE BEST STREET AND TOWN TREES FOR GENERAL UTILITY (Citizen).—1. The Oriental or Common London Plane (*Platanus orientalis acerifolia*) not only grows vigorously in towns, but is peculiarly well adapted for withstanding the smoke and other impurities of their atmosphere. 2. The Black Italian Poplar (*Populus monilifera*), next the London Plane, is the most valuable for planting in smoky towns, its broad leafage being very bold and effective. The Canadian Poplar in the variety nova (*Populus canadensis nova*), however, rivals the Black Italian Poplar in rapidity of growth, and is a very superior tree for street planting. 3. The Ailantus, or Tree of Heaven (*Ailantus glandulosa*) thrives well in towns, and is very handsome. 4. The False Acacia (*Robinia Pseud-acacia*) is beautiful alike from leafage and flower. 5. The Tulip Tree (*Liriodendron tulipifera*) possesses a garb of rich, bold greenery, and from its smoke-resisting properties stands high in the rank of town trees. Mention must also be made of the Black and White Mulberry trees (*Morus nigra* and *M. alba*), excellent town trees. 6. The Cucumber Tree (*Magnolia acuminata*), splendid in its bold foliage. Note must also be made of the Maidenhair Tree (*Ginkgo biloba*), as it succeeds well in the impure atmosphere of a town garden.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (J. F. S.).—*Tibouchina* (or *Lasiandra*) *macrantha*. (Leon).—1, *Cupressus Lawsoniana*; 2, *Pinus excelsa*; 3, *Daphne Laureola*. (F., Hants).—1, *Costus igneus*; 2, *Cattleya labiata*; 3, *Cypripedium x Leeanum* var.; 4, *Cattleya x Sallieri*; 5, *Cypripedium x Williamsianum*. (W. S., Sussex).—*Lælia anceps*.

NAMES OF FRUITS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (P.).—1, Byford Wonder; 2, Fallawater; 3, Winter Peach; 4, Royal Jubilee; 5, Wellington. (F.).—1, *Mère de Ménage*; 2, Bow Hill Pippin; 3, Golden Reinette; 4, Beauty of Kent.

Covent Garden Market.—December 22nd.

Average Wholesale Prices.—Vegetables.

	s. d.	s. d.		s. d.	s. d.
Artichokes, Globe, doz.	2	6 to 3	0	Mushrooms, house, lb.	0 10 to 1 0
„ Jerusalem, sieve	1	6	2	Onions, per case ...	5 0 5 0
Asparagus, Sprue, bundle	1	0	1 1	„ per bag ...	4 0 5 0
„ Paris Green...	4	0	5 6	„ picklers, sieve	2 6 4 0
Beans, dwarf, per lb.	0	8	0 10	„ English, cwt.	5 0 5 6
„ Madeira, basket...	1	6	2 0	Parsley, doz. bnchs.	1 0 1 6
Beetroots, per bushel...	1	6	2 0	„ sieve...	0 6 1 0
Brussels Sprouts, sieve	1	3	1 9	Parsnips, per bag ...	2 0 2 6
Cabbages, tally ...	2	0	3 6	Potatoes, per ton...	75 0 130 0
Carrots, doz. bun.	1	3	2 0	Radishes, doz. bun.	1 0 1 9
„ per bag ...	2	6	3 6	Rhubarb, per doz.	1 6 2 0
Cauliflowers, doz.	1	0	2 0	Salad, small, pun., doz.	0 9 1 0
Celery, per doz. bun.	7	0	12 0	Seakale, per doz...	15 0 21 0
Cress, per doz. pun.	0	9	1 0	Shallots, per lb.	0 1½ 0 2
Cucumbers doz.	10	0	14 0	Spinach, per bush.	3 0 0 0
Endive, per doz.	1	0	0 0	Tomatoes, Channel Is-	
Garlic, per lb.	0	2	0 3	lands, per lb....	0 3 0 0
Horseradish, foreign,				„ Canary Deepes	3 0 5 6
per bun.	1	3	1 6	Turnips, doz. bun.	1 0 1 6
Leeks, per doz. bun.	1	0	1 6	„ per bag ...	2 0 2 6
Lettuces, Cabbage, doz.	1	0	0 0	Watercress, doz. bun.	0 4 0 6

Average Wholesale Prices.—Fruit.

	s. d.	s. d.		s. d.	s. d.
Apples, home-grown,			Grapes, Gros Maroc, lb.	1 0 to 0 0	
cookers, per bushel	3	0 to 10	0	„ Muscats, A., lb.	5 0 6 0
„ per half bushel ...	2	0	5 0	„ „ B., lb.	0 9 1 6
„ per barrel ...	12	0	18 0	„ „ Canon	
„ American, in cases	8	0	10 0	Hall, A., lb.	4 0 6 0
Bananas, bunch ...	7	0	12 0	„ Muscats, B., lb.	2 0 3 6
„ loose, dozen...	1	0	1 6	Lemons, per case...	8 6 25 0
Blackberries, per peck	2	6	0 0	Lycchees, box...	1 2 0 0
Chestnuts, bag ...	6	9	14 0	Oranges, per case...	4 6 13 0
Cobnuts, per lb.	0	7½	0 8	Pears, per case ...	9 0 10 6
Cranberries, per case ..	15	0	0 0	„ stewing ...	6 0 0 0
Figs, per box ...	0	10	1 0	Pines, each ...	2 0 6 0
Grapes, Alicante, lb.	0	7	1 3	Walnuts, Grenoble, bag	6 0 7 6
„ in Barrel...	10	0	18 0		

Average Wholesale Prices.—Cut Flowers.

	s. d.	s. d.		s. d.	s. d.
Azaleas, doz. ...	4	0 to 6	0	Mignonette, per doz.	2 0 to 3 0
Bouvardias, per bun.	0	4	0 6	Mimosa (Acacia), per	
Callas, per dozen.	3	0	4 0	doz. bun.	6 0 9 0
Camellias, box ...	2	0	3 0	Mistletoe, bunch ...	0 6 5 0
Carnations, per bun.	0	6	3 0	Narcissus, doz. bun.	3 0 4 0
Chrysanthemums—				Orchids, Cattleya, doz.	6 0 12 0
doz. bunches ...	3	0	6 0	„ Odontoglossums,,	1 6 2 6
Eucharis, per. doz.	3	0	4 0	„ Cypripedium in-	
Ferns—Asparagus, bun.	1	0	2 6	signe, per doz.	1 0 2 0
French, doz. bunches	0	4	0 6	Pelargoniums, zonal,	
Maidenhair, doz. bun.	4	0	6 0	doz. bun...	6 0 8 0
Gardenias, box ...	1	0	1 6	Poinsettias, bun...	0 10 1 0
Holly, bunch...	0	9	2 0	Roman Hyacinths, bun.	0 6 1 0
Honesty (seed vessels),				Roses, Mermet, per doz.	3 0 6 0
per bunch ...	1	0	3 0	„ Various, per bun.	0 6 1 6
Lilac (French), bun.	5	0	0 0	„ White	1 6 2 0
Lilium longiflorum, bun.	3	6	4 0	„ Pink	1 0 2 0
„ lancifolium „	1	6	3 0	Smilax, per doz. trails	1 0 1 6
„ auratum	1	0	2 0	Stephanotis, per doz...	1 6 3 0
Lily of the Valley, per				Tuberose, strong, bun.	0 9 1 0
doz. bun.	6	0	12 0	doz.	0 2 0 3
Marguerites, yellow,				Violets, per doz. bun...	1 0 1 6
per doz. bun.	1	0	2 0	„ Parma, per bun.	1 0 2 0

Average Wholesale Prices.—Plants in Pots

Most of the undermentioned plants are sold in 48 and 32-sized pots

	s. d.	s. d.		s. d.	s. d.
Adiantums, per doz.	4	0 to 8	0	Euonymus, vars., doz.	4 0 to 6 0
Aralias, per doz.	4	0	8 0	Ferns in var., per. doz.	4 0 30 0
Arbor Vitæ, per doz.	9	0	18 0	Ficus elastica, doz.	9 0 24 0
Aspidistras, per doz.	18	0	36 0	Lilium longiflorum, doz.	6 0 12 0
Aucubas, per doz.	4	0	8 0	„ lancifolium	6 0 12 0
Begonia, per doz...	8	0	18 0	Lycopodiums, per doz.	3 0 4 0
„ Gloire de Lor-				Marguerites	6 0 12 0
rairie, per doz.	8	0	24 0	Orange Trees, each	3 6 10 6
Chrysanthemum, doz.	4	0	30 0	Palms, var., each	3 0 20 0
Coleuses, per doz.	4	0	5 0	Poinsettias, per doz...	8 0 12 0
Crotons, per doz.	12	0	24 0	Primulas, per doz.	4 0 0 0
Cyclamens, per doz.	10	0	12 0	Pteris tremula, per doz.	4 0 8 0
Cyperus, per doz...	3	0	4 0	„ Wimsetti	4 0 8 0
Dracenas, var., doz.	12	0	48 0	„ major	4 0 6 0
Ericas, per doz.	8	0	12 0	Solanums	4 0 6 0

Average Wholesale Prices.—Ferns, Foliage, Moss.

	s. d.	s. d.		s. d.	s. d.
Asparagus, long, bnch.	2	0 to 2	6	Ivy leaves, doz. bun...	1 6 to 0 0
„ medium, bunch ...	1	3	1 6	Myrtle, large French,	
„ short, per doz. bun.	6	0	7 0	per doz. bun.	1 0 0 0
„ Sprengeri, dz. bun.	9	0	18 0	„ small English, per	
Smilax, long, doz. trails	3	0	0 0	doz. bun...	6 0 0 0
Maidenhair, best, per				Moss, natural green, per	
doz. bnchs.	0	0	6 0	gross bun.	6 0 0 0
Berberis, per doz. bun.	0	0	0 0	„ Lichen, full size	
Croton foliage, various,				boxes, per box	1 0 0 0
per doz. bun...	9	0	12 0		



Pigs: Feeding and Breeding.

The pig is, or rather has been, looked upon as the inferior animal of the farm. That he is at the present moment is very doubtful. We can remember the time when, with good grain at 1s. 6d., and offal at 1s. per stone, pork at 7s. 6d. was considered by farmers a product to be avoided except in case of necessity. At the present time pork is worth from 6s. to 6s. 9d. per 14lbs, not a very serious reduction in price from

that of thirty years ago. But when we consider the value of pork-producing foods, what a difference we find. Meals which then cost 1d. per lb can now be bought for 9d. per stone, a reduction of 40 per cent.; whilst in too many cases farmers have on their hands quantities of unsaleable corn, which only requires grinding to provide excellent food for the pigs. Then there are enormous quantities of Potatoes which are damaged by disease sufficiently to spoil them for market purposes, but are almost as good as the best for pig food. We doubt whether in the history of modern farming there has been a time when good pig food was so plentiful, or such an excellent opening for the pig feeder.

There is no question about the folly of selling well-grown, but damaged Barley at 18s. or 20s. per qr, if pigs can be found to turn it into pork. We once tried an experiment with a number of pigs with a view to ascertaining the return per ton for the use of sound Potatoes of small size and low quality. We steamed a quantity of these Potatoes, and used with them a mixture of bought Wheat thirds, and home-grown offal barley meal, charged at the same price. After charging all labour and expenses, the balance left to credit of the Potatoes amounted to 58s. per ton, or 23s. per ton more than they would have realised on rail at the nearest station. The price of pork, too, was rather under than over 6d. per lb.

During the last few years, no doubt the swine fever restrictions have militated much against the extension of pork production in Great Britain, but we hope that these restrictions, vexatious as they are, may soon be relaxed, as the object for which they were framed is fully attained, and that the natural adaptability of this country for the breeding and feeding of swine may receive fuller recognition. The effect of swine fever restrictions has been chiefly to prevent breeding, and for several years, until the present, young pigs have been scarce and dear. During last summer they fell to a comparatively low figure; but they are dearer again, and show every sign of another boom. There is, however, good encouragement to breed from gels of a suitable age; and we advise our friends to do so. There is no better time for sows to farrow than in March or April, and those mated with the boar now would be due during the latter month.

Many people consider that a gelt which is somewhat fat, or as they term it "nice pork is not suitable for breeding purposes." Well! If we wish to produce animals of a thriving nature, we must breed from such, and although there may be some truth in the argument that such animals do not readily produce offspring, we may at any rate give them one or more chances to do so. In case of failure, no harm, but rather good, has been done to the process of feeding, and the use of the boar is not a ruinous item. Amateurs are too easily scared from pig feeding by the cost just at first, of the meal supply. They may be buying in anything but the cheapest market and using far more of this costly commodity than is economically advisable. Of course, pigs vary in constitution as in appetite, and the ration on which one pig would do well and give a profitable return may be quite inadequate for one of quicker growth and larger appetite. In feeding with food of our own production, we have to cut according to our cloth and the main object is the profitable conversion of that food into saleable pork. If we have a large quantity of offal Potatoes and are fortunate enough to have little unprofitable grain, there is no reason for spending good money in purchasing meal. Pigs will feed on Potatoes with very little added meal, though they may be a little longer in the process. A large pig of 300 to 400 lbs. weight, will eat 70 to 80 lbs. of meal per week and many will eat more. But with Potatoes, raw and steamed (*ad lib*), the meal may be reduced to 20 lbs. per week. Many a cottager's pig has scaled 500 lbs. carcase weight, after being fed on Potatoes almost entirely. Steamed Potatoes are given morning and night, and raw Potatoes at mid-day. The steamed Potatoes are well mashed while hot. The allowance of meal is mixed with boiling water and left to stand for some hours before being mixed with the hot mashed Potatoes, and then given immediately to the pigs.

Many pig feeders do not approve of more than two meals per day, for their animals, but it stands to reason that in such case the meals must be heavy ones. These feeders are farmers or their men. The cottager's wife, who has to make the most of her food, prefers to feed oftener, but gives every morsel in a cooked condition and hot. The one point in favour of two meals is the avoidance of disturbance, for the less feeding animals are roused from rest, the better; but the pig, greedy a feeder as he is, has only a limited capacity of stomach. Is a term of 12 hours too long a time for the stomach to go un replenished? If the food be highly concentrated, perhaps not; but if as in the case

of the cottager, the food be limited (more in quality than quantity) then is it necessary to feed oftener, and the virtue of frequent and hot meals may become a necessity.

Work on the Home Farm.

Although there has been little rainfall lately, the surface of the land is still moist and sticky, and ploughs do not run cleanly; yet we are inclined now to tackle all the arrears which can be made up, for we notice that the land dries much more rapidly after being moved, even though the ploughing may have been done under difficulties.

We have never had such a large breadth of cleared Turnip land requiring ploughing as is before us now. We have always made a point of keeping the plough moving as close as possible behind the sheepfold; but circumstances have this season intervened and prevented us. Now, however, there is an opportunity, and the work will be taken next. We shall plough with the ordinary swing plough, and take a 9in furrow 5in deep.

The corn trade has been so slow lately that since November little threshing has been done, and few waggons are seen on the roads with loads of grain. The contrary is the case, however, with Potato delivery. A considerable quantity is now being moved on to rails, and it is fair to suppose that the markets are strengthening. Our experience shows that the Potatoes are keeping fairly well, but nevertheless the quantity of sound tubers is small compared to the quantity we have to discard, and after every effort has been made, the buyer is constantly complaining of bad sorting.

The boom in Northern Star, &c., has had a lull, or rather it has been eclipsed by the boom of Eldorado. Next year's crop of this Potato for November delivery has lately been booked at 40s. per pound. Within a week the demand has been such that the price has risen to 50s., and now to 60s., with every likelihood of going to 100s. Veritably, wonders never cease!

The fat stock markets are over, and our local ones have been most successful. The quality of the animals has been of all-round excellence, the numbers large, and prices quite satisfactory. Some of the best beef made 7½d. per pound, and pork sold well. Six shillings for 14lb was easily obtained for the largest pigs up to 600lb dead weight.

Many gates between fields are of no use during winter, and are better brought home and put in a shed. If they are dry enough they may be painted ready for rehanging when required. Black varnish is a good substitute for paint, and the work can be done during wet weather, and find occupation for otherwise idle hands.

The Potato Boom.

Some further remarkable prices have been realised for a few pounds of Potatoes. On December 11, at the Lincoln market, a local firm disposed of 7lb of Eldorado Potatoes for £700, or at the rate of £224,000 per ton. The purchaser afterwards resold part at £150 per pound, which is more than double their weight in gold.

The Manurial Experiments at Alfreton.

Professor Blackshaw, of the Midland Agricultural and Dairy Institute, has just concluded interesting manurial tests at the Shirland Lodge Farm, near Alfreton. The tests were made to determine the value of artificial and farmyard manures in the growth of Swede Turnips, and which was the most economical and productive for the farmer. In no way have the experiments been carried out to disparage the use of farmyard manure, but to enable the farmer to be progressive, to keep abreast of the times, and economise. In all thirteen plots were experimented upon, and it is clear from two instances where no manure of any description was applied that crops must have a fertiliser, and some forcing power. The plots covered one-twentieth of an acre, and the plot which was dressed with 4cwts of superphosphate produced fourteen tons 17cwts 16lbs of Turnips per acre. The plot dressed with 1½cwts of nitrate of soda and 4cwts of superphosphate produced 19 tons 5cwts per acre, while with an equal quantity of these elements and 2cwts of kainit only 18 tons 18cwts 2qrs 8lbs per acre were produced, thus showing apparently that kainit was of no value at all. A double quantity of these ingredients raised 22 tons 3cwts 2qrs 8lb per acre, which again proportionately proves the uselessness of kainit on the experimental land. Fifteen loads of farmyard manure produced 16 tons 19cwts per acre, while ten loads produced about 1cwt per acre less. The same quantity with assortments of artificial manures increased the production by as much as four and five tons per acre. Estimating the cost of the various manures on the plots, the plot containing superphosphate alone seems to have been the most economical, and the most productive, proportionately speaking. At the same time it was stated to be clear that farmyard manure is still a serious rival to the artificial dressing.

SEEDS.

**DICKSON &
ROBINSON,**

The King's
Seedsman,



Manchester.

Our
NEW CATALOGUE

Has been posted to all
Customers.

KEYNES' ROSES.

Best Plants.
Best Varieties.
Moderate Price.

Catalogues Post Free.

KEYNES, WILLIAMS & CO.,
Rose Growers, SALISBURY.

GRAPE VINES in POTS

Extra Strong Fruiting and Planting Canes
in all Leading Varieties.

FIGS IN POTS

All Leading Sorts.
Bushes and Fan-trained for Walls.

DICKSONS Nurseries CHESTER

ORCHIDS.

CLEAN HEALTHY PLANTS AT LOW PRICES.

Always worth a visit of inspection. Kindly send for Catalogue.

NEW LIST NOW READY.

JAMES CYPHER AND SONS,
Exotic Nurseries, CHELTENHAM.

RIVERS'

FRUIT TREES,

ROSES, VINES,

FIGS, ORANGES,

AND

Orchard-House Trees.

▲ LARGE AND SELECT STOCK
ALWAYS ON VIEW.

ILLUSTRATED & DESCRIPTIVE CATALOGUE,
Post Free, 3d.

THOMAS RIVERS & SON,

SAWBRIDGEWORTH, HERTS.

HARLOW STATION, G.E.R.

No. 1227.--VOL. XLVII., THIRD SERIES.

CLIBRANS

NEW SINGLE

CHRYSANTHEMUMS.

OUR List of the above for 1904, together
with the choicest New Varieties of
other classes from all sources, will be ready
early in January.

Gratis and Post Free on Application.

CLIBRANS

GENERAL LIST of

CHRYSANTHEMUMS.

Extending to 58 Pages, and containing the
finest selection of varieties in every section,
fully described and priced, together with
index, is now ready.

Gratis and Post Free on Application.

ALTRINCHAM & MANCHESTER

NEW CHRYSANTHEMUMS.

See Special Novelty List—now ready,
Also general Catalogue, both post free on application.

Thousands of strong healthy plants, specially
prepared for Exhibition, in all the leading varieties,
from 4s. per dozen, ready in February.

NORMAN DAVIS,

Chrysanthemum Nurseries,
FRAMFIELD, UCKFIELD, SUSSEX.

DICKSONS

HARDILY - GROWN
**FOREST, FRUIT,
AND ALL OTHER
TREES & PLANTS
EVERGREENS,
ROSES, &c.**

Stocks quite unequalled for
'QUALITY,' 'VARIETY,' & 'EXTENT.'
Priced Catalogues Post Free.
NURSERIES 500 ACRES.

CHESTER

THE GARDEN MANUAL: for the Cultivation
and Operations required for the Kitchen Garden,
Fruit Garden, Flower Garden, and Florists' Flowers.
Illustrated with Engravings and Plans. By the Editors
and Contributors of the *Journal of Horticulture*. REVISED
EDITION now ready. Fcap. 8vo, cloth, price 1/6; post
free, 1/9. ** 44,000 of previous editions already sold.—
JOURNAL OF HORTICULTURE Office, 12, Mitre Court
Chambers, Fleet Street, E.C.



Journal of Horticulture.

THURSDAY, DECEMBER 31, 1903.

Chrysanthemum Analysis.



NCE more it is my pleasure to
present to the readers of the
Journal of Horticulture, by the
kind and willing aid of those
qualified, an up-to-date selection
of Chrysanthemums on a more
comprehensive scale than in some
years past. No less than forty persons
are taking part in this election, every
one of them exhibitors of the present year.
If this note should catch the eye of any person
who has in the past kindly assisted in this
audit, and who is not now an exhibitor, he will
readily understand why I did not include him.
From numerous letters received, some a long
time before the time to issue invitations, asking
when the audit was to take place, and hoping
it would, I am convinced that Chrysanthemum
cultivators generally appreciate this yearly
analysis.

To make the selected list of varieties more
comprehensive and useful, I have added, as
briefly as possible, the colour of each; as those
who are not conversant with the varieties, and
have not an opportunity to visit the leading
shows, desire such information in making a
selection of varieties for the coming season in
as concise a manner as possible. If some
persons should think the colour descriptions
hardly sufficient in some varieties, he will
understand that brevity has been the main
object in that particular.

Mainly in the past the balloted lists have
been confined to Japanese and incurved
varieties. This time, to make the selection
more useful to that body of cultivators who
desire Chrysanthemums, but not in an exhibi-
tion sense, I have attached selections of
other sections, such as decorative varieties,
single-flowered and pompon kinds, so that
such cultivators in ever so small a manner
cannot say that this yearly audit is confined

READERS are requested to send notices of Gardening
Appointments or Notes of Horticultural Interest,
intimations of Meetings, Queries, and all Articles for
Publication, officially to "**THE EDITOR**," at
12, Mitre Court Chambers, Fleet Street,
London, E.C., and to no other person and to no other
address.

to the exhibitor alone I am positive that those who cultivate Chrysanthemums in a decorative sense—small blooms—are distinctly on the increase. For this reason I am sure the *Journal of Horticulture* will open its pages for the benefit of those enthusiasts.

As showing the decline in the incurved section, but twenty-three persons—a trifle over half—sent in returns for this type. This fact may not be pleasant reading to those who are so enthusiastic over the incurved flower, but it is a distinct proof of how their value is regarded as compared to the more showy Japanese varieties.

Notes on the Japanese section.—To obtain fifty of the best varieties no fewer than one hundred and ninety-seven names are given, which is a distinct proof of the wide range of opinion held by the forty electors. Although it is a large number it does not cover quite so wide a range in proportion as last year, when twenty-seven voters named one hundred and fifty-seven sorts. Again, the year before sixteen voters gave one hundred and fifty-two varieties. For the year 1900 in obtaining a list of sixty varieties two hundred and thirty-one names were given by the thirty-three persons who took part. This time I only give the names of those varieties that obtain five votes, thinking no good purpose would be served by adding all.

As in last year W. R. Church heads the list with a full number of votes, showing what exhibitors generally think of this variety, which is a distinct compliment to our Australian friends. It is somewhat strange that this one variety only should receive the full complement of votes and not one variety that has thirty-nine. Mrs. Barkley and Mrs. G. Mileham tie for second place, both good types of Japanese flowers. These two maintain their position in a steadfast manner. As was to be expected, F. S. Vallis has this season taken a strong lead; from nineteen votes last year it has now secured thirty-seven, a position it richly deserves. By the majority of Chrysanthemum cultivators it was considered to be a "Vallis" year. Its co-partner, Madame P. Radaelli, has been exhibited remarkably well, and secures a prominent position. No fewer than four varieties tie for the third place. No one will dispute the good quality of either, all combine the points that go to make Japanese Chrysanthemums popular, viz., size, form, colour, and general quality, without the slightest tendency to coarseness.

A similar remark applies to the following five varieties which receive an equal share of votes. One and all are desirable types, especially Bessie Godfrey and Miss E. Fulton. The former has well maintained the high position it won last season, while the latter is, perhaps, one of the best types of an incurved Japanese bloom.

Australie has dropped from the second place of the last two years to the sixth in the present list. Even its best adherents must admit it has had a good innings. That charming white flowered variety, Mrs. J. Lewis, exhibits a similar weakening, falling to the eighth position. Nellie Pockett has fallen from the third to the tenth place, while Miss Alice Byron has shared a very similar fate if not quite so decisive, perhaps. Godfrey's Pride has doubled its number of votes, which speaks for itself. Florence Molyneux has dropped from the second position last year to the twelfth this, an ominous sign for this English raised variety. Mons. Chenon de Léché is dwindling in the support it receives. In the list of 1901 it was equal with the highest; last year it dropped to the fourth place, while this season it sinks nine votes deeper.

Le Grand Dragon just succeeds in its inclusion in the fifty selected, while last year it was but seven votes from the top; the year before it was equal with four others for the premier place. It cannot be said that Miss Mildred Ware has progressed as well as its friends could have wished, it only gets within the select list by one vote. An almost similar remark applies to Edwin Molyneux. This still grand variety in some hands has lived long, much longer than any other variety, and has enjoyed great popularity. It is now but natural to think, like all others, it has in a general way seen its best days. It does seem strange, too, to think that from the many thousands of seedlings from it not one is like it in colour. C. J. Warren, Calvat's '99, Loveliness, Mr. J. J. Thornycroft, and Mrs. Coombes have quite fallen out of favour—the latter this time obtained but five votes. Queen Alexandra but eight, Pride of Madford and Ben Wells but eight, Vivian Morel, Lady Hanham and Edith Tabor are distinctly low. Charles Davis, Mutual friend, and Henry Barnes each receive three votes. The

once popular Phœbus, Simplicity, Madame P. Rivoire, and Graphic are only named twice. While Madame A. Chatin, Godfrey's Masterpiece, Swanley Giant, Mons. Hoste, W. H. Lees, Eva Knowles, Mrs. E. W. Clark, and fifty-three others have but one solitary supporter.

VOTES FOR THE BEST FIFTY JAPANESE.

- | | |
|---------------------------------------------------------------|------------------------------------------------------|
| 40. W. R. Church, rosy crimson, bronze reverse | 18 Mrs. F. W. Vallis, crimson, shaded apricot yellow |
| 38 Mrs. Barkley, rosy mauve | 17 Miss Mildred Ware, deep rosy cerise |
| 38 Mrs. G. Mileham, silvery mauve, shaded rose | 17 Le Grand Dragon, orange yellow, lined red |
| 37 F. S. Vallis, canary yellow | —50 |
| 37 Madame Paolo Radaelli, rose and white | |
| 36 Sensation, rich orange, shaded bronze | |
| 36 Mafeking Hero, deep bronze | |
| 36 Mrs. Mease, primrose | |
| 36 Lord Ludlow, golden amber, edged red | |
| 35 General Hutton, shaded, bronzy red | |
| 35 J. R. Upton, golden yellow | |
| 35 Miss E. Fulton, white | |
| 35 Bessie Godfrey, canary yellow | |
| 35 Madame Carnot, pure white | |
| 34 Australie, rosy amaranth, silvery reverse | |
| 34 Ethel Fitzroy, orange amber, shaded crimson | |
| 34 Mrs. Greenfield, rich yellow | |
| 33 Duchess of Sutherland, orange yellow | |
| 33 Mons. Louis Remy, chrome yellow | |
| 33 Madame Herrewége, pure white | |
| 33 Marquise V. Venosta, reddish purple | |
| 32 Mrs. J. Lewis, white | |
| 31 Matthew Smith, golden yellow, flushed crimson | |
| 31 Mrs. J. Bryant, rosy lilac | |
| 30 Kimberley, golden yellow | |
| 30 Guy Hamilton, white | |
| 30 Miss Nellie Pockett, pearly white | |
| 30 Miss Alice Byron, white | |
| 28 George Lawrence, golden bronze | |
| 28 Godfrey's Pride, reddish carmine crimson | |
| 27 Florence Molyneux, white | |
| 27 T. Carrington, rich carmine rose | |
| 27 Madame R. Cadbury, ivory white | |
| 26 Mons. Chenon de Léché, rosy buff, shaded yellow | |
| 25 Henry Stowe, blush pink, shaded mauve and white | |
| 25 Mr. H. Weeks, pearly white | |
| 25 Mrs. E. Hummel, pinky white, shaded yellow in centre | |
| 23 Calvat's Sun, canary yellow | |
| 21 Mrs. H. Emmerton, deep canary yellow | |
| 21 Mrs. E. Thirkell, deep yellow | |
| 21 Madame Gustave Henry, white | |
| 19 Madame Waldeck Rousseau, chocolate crimson, bronze reverse | |
| 19 Charles Longley, deep rosy purple | |
| 18 Madame Nagelmacker, white | |
| 18 Mrs. T. W. Pockett, deep canary yellow | |
| 18 Lily Mountford, blush pink | |
| 18 Sir Herbert Kitchener, golden orange and fawn | |
| 18 Edwin Molyneux, rich crimson, reverse gold | |
| 18 Mrs. F. W. Vallis, crimson, shaded apricot yellow | |
| 17 Miss Mildred Ware, deep rosy cerise | |
| 17 Le Grand Dragon, orange yellow, lined red | |
| —50 | |
| | 16 Mrs. J. C. Neville, white |
| | 16 Henry Perkins, reddish crimson on yellow ground |
| | 15 Mrs. J. J. Thornycroft, apricot, flushed orange |
| | 15 Dorothy Pywell, creamy white |
| | 14 Rev. W. Wilks, deep rose |
| | 13 G. J. Warren, canary yellow |
| | 13 Princess de Brancova, white |
| | 12 Mrs. Robert Darby, purple amaranth |
| | 12 Loveliness, canary yellow |
| | 11 Calvat's '99, pearly mauve |
| | 10 W. Duckham, pale mauve |
| | 10 Miss Olive Miller, pink |
| | 10 Nellie Beau, lavender pink |
| | 9 George Penford, crimson scarlet |
| | 9 Godfrey's King, reddish crimson, golden reverse |
| | 8 Queen Alexandra, rosy salmon buff |
| | 8 Henry Weeks, crimson chestnut |
| | 8 Mary Inglis, terra cotta on a fawn ground |
| | 8 Mermaid, white, flushed rose |
| | 8 Madame G. Debric, Malmaison pink |
| | 7 Miss Lucy Evans, heliotrope pink |
| | 7 Lord Salisbury, yellow, suffused crimson |
| | 7 Lady Mary Conyers, rosy pink, silver reverse |
| | 7 Ben Wells, blush white |
| | 7 Pride of Madford, crimson cerise |
| | 7 Violet Lady Beaumont, deep crimson |
| | 6 George Mileham, deep rich crimson |
| | 6 General Buller, bronze amber |
| | 6 C. Penford, reddish crimson, buff reverse |
| | 6 S. T. Wright, velvety crimson |
| | 6 Edith Tabor, canary yellow |
| | 6 W. H. Whitehouse, rosy red |
| | 5 Princess A. de Monaco, white |
| | 5 Donald McLeod, apricot yellow, shaded crimson |
| | 5 Lady Hanham, golden rosy cerise |
| | 5 The Princess, creamy white |
| | 5 Vivian Morel, deep mauve |
| | 5 Mrs. S. Fryett, deep carmine |
| | 5 Florence Penford, lemon yellow, chrome reverse |
| | 5 Mrs. Coombes, deep rosy flesh pink |
| | 5 Madame Louis Remy, white |
| | 5 Exmouth Crimson, crimson |
| | 5 Emily Towers, rose, shaded white |
| | 5 Alfriston, crimson purple |

LIST OF ELECTORS.

- Mr. Perkins, Greenlands, Henley-on-Thames
 Mr. G. Foster, Glendanaugh Gardens, Teignmouth
 Mr. J. Lock, Oatlands Lodge, Weybridge
 Mr. W. Barnes, Bear Wood, Wokingham
 Mr. W. Higgs, Fetcham Park, Fetcham
 Mr. C. Beckett, Chiltern Lodge, Hungerford
 Mr. R. Kenyon, Monkham, Woodford, Essex
 Mr. G. Haigh, Highfield, Woolton, Liverpool
 Mr. Cole, Swallowfield Park, Reading
 Mr. A. Jefferies, Moor Hall, Harlow, Essex
 Mr. Beisant, Castle Huntly, Longforgan, N.B.
 Mr. W. Nicholson, Strathallan Castle, Machaney, N.B.
 Mr. T. Lunt, Keir Gardens, Dunblane, N.B.

Mr. G. E. Thomas, Studley Royal, Ripon
 Mr. G. Williams, Duneombe Park, Helmsley
 Mr. McPherson, Londesborough Park, Market Weighton
 Mr. Folkard, Sherrieff Hutton, York
 Mr. A. Chandler, Cotton House, Rugby
 Mr. T. Whittell, Rushmere, Essex
 Mr. J. Hunt, Ashted Park, Epsom
 Mr. W. Mease, Downside, Leatherhead
 Mr. C. Jones, Spital Old Hall, Birkenhead
 Mr. J. Preece, Warley Place, Brentwood
 Mr. T. Young, Otterspool House, Liverpool
 Mr. D. Cavanagh, St. Edwards, Murrayfield, Edinburgh
 Mr. G. Hewitt, Heydon Grove, Epping
 Mr. W. Neville, Cornstiles, Twyford, Winchester
 Mr. J. Wasley, Sherfield Manor, Basingstoke
 Mr. Bastin, Buscot Park, Faringdon
 Mr. Goodaere, Elvaston Castle, Derby
 Mr. Bible, Draycot Park, Chippenham, Wilts
 Mr. Drake, 44, Cathays Terrace, Cardiff
 Mr. C. J. Salter, Woodhatch, Reigate
 Mr. T. Smith, Grantully, West Hartlepool
 Mr. A. Creek, The Chantry, Ipswich
 Mr. L. Dawes, Hambledon, Hants
 Mr. J. Brooks, Brandon Hall, Coventry
 Mr. Everard, Holgate Lodge, York
 Mr. H. A. Allen, Pentwyn, Albert Creseent, Penarth
 Mr. G. Hall, Melehet Court, Romsey

NOTES ON THE INCURVED SECTION.

To obtain thirty-six varieties one hundred and fifteen names are given as compared to one hundred and eight last year, and ninety-eight the year before, which is a proof of the wide range of variety prevailing in the minds of the electors. Speaking generally, the selection from present day varieties is a good one. The sorts that did duty from fifteen to twenty years since are quite obsolete from the present selection. The present list does not contain a single variety that was constantly to be met with in the exhibition room ten years since. This is, in my opinion, a proof of how the constitution of varieties decays, some much more quickly than others. With but a few exceptions the present list of three dozen varieties are really good types of the incurved section; they may not possess, perhaps, all the characteristics that were deemed necessary by the hard and fast florist of twenty years past. In those days where one variety was introduced as a seedling we have now twenty, and the bulk of them obtained by intercrossing with Japanese varieties with a view to improve the colour which in the incurving section is admittedly not so bright as in the Japanese. This intercrossing then of two types or sections cannot but affect form and contour to a considerable degree. What we now gain in size we lose in formation. The globular shape is not nearly so frequent in new sorts as it was. It cannot be said either that the constitution of present day varieties is at all equal to those raised from fifteen to twenty years since. The oldest variety, James Agate, in the present selection does not date further back than 1894; C. H. Curtis was introduced a year later, whereas the first of the Queen family dates back as far as 1847.

As for several years past C. H. Curtis and Duchess of Fife have headed the poll, they still retain that position in company with Lady Isobel and Ialene. Frank Hammond still maintains the place high up in the list which its quality entitles it. Hanwell Glory and Miss Nellie Southam still are not deposed. Mrs. R. C. Kingston has fallen from the third to the sixth place in the list. Last year four members of the Queen family found places in the thirty-six; this year there is not one. John Lambert, Lord Alcester, Empress of India, and Golden Empress receive respectively eight, seven, six, and five votes from a possible twenty-three, which is a distinct proof of the wane in popularity of this section. Not one member of the Princess family is to be found with more than four votes, the type, Princess of Wales, receiving but three; no less than thirty-five obtain but a solitary supporter. President Bevan is one of these, which is a plain proof what electors think of the variety. I always maintained it should be classed with the incurving Japanese section. A few more eliminations of this kind would do much towards raising the standard of the incurved section. Mdle. Laurence Zédé has at last disappeared from the list, and so have all the members of the Rundle family. Prince Alfred and Lord Wolseley have at last vanished, having done service for thirty and twenty years respectively. Princess Teck and her numerous sports are never heard of now, although in the eighties they could not be done without. There is no doubt the decline in the incurved Chrysanthemum is largely due to ill selection,

imperfect representation of varieties, and their inability to cope generally in decorative value with their more showy compeers—the Japanese kinds.

VOTES FOR THE BEST THIRTY-SIX INCURVED.

23 C. H. Curtis, rich yellow	12 Pantia Ralli, bronzy buff
23 Duchess of Fife, white, shaded blush	11 Mrs. W. C. Egan, lilac pink
23 Lady Isobel, lavender blush	11 Louisa Giles, rich golden yellow
23 Ialene, rosy violet	10 General Symonds, orange buff, shaded bronze
22 Frank Hammond, rosy bronze, yellow centre	10 Miss V. Foster, silvery violet
22 Miss Nellie Southam, deep rose purple	10 Countess of Warwick, white, tinted purple
22 Hanwell Glory, deep bright bronze	10 Egyptian, deep velvety red
22 Mrs. H. J. Jones, white, tinted rose	9 G. W. Matthew, soft amber
20 Ma Perfection, pure white	—26
20 Mrs. F. Judson, white	8 Mildred Lyne, fawn, shaded bronze
19 Madame Ferlat, white	8 John Lambert, buff, shaded rose
19 Topaze Orientale, pale yellow	8 George Haigh, rosy earmine
19 Charles Blick, rosy violet on a white ground	8 Edith Hughes, white, lined purple
19 William Higgs, golden buff	7 Perle Dauphinoise, yellow, tinted bronze
18 Ralph Hatton, purple lilac	7 Miss D. Foster, silvery mauve
18 Fred Palmer, blush pink	7 The King, rich lake, silver reverse
17 Mrs. C. Crooks, white	7 Lord Alcester, primrose
17 Globe d'Or, yellow, tinted bronze	6 Empress of India, white
17 Mrs. R. C. Kingston, soft lilac pink, lined white	6 Mrs. Bernard Hankey, chestnut, suffused red
17 Pearl Palace, white shaded pink	6 Major Bonnaillon, clear yellow
15 Nellie S. Threlfall, white	6 Nellie Stevens, earmine rose, flushed cinnamon
15 George Lock, chestnut crimson	6 Mrs. W. Higgs, silvery pink
15 Miss E. Seward, deep yellow, lined reddish brown	5 Mary Phillips, rose base, yellow centre
15 Chrysanthemiste Bruant, rosy buff	5 Mrs. E. Bennett, rosy pink
14 Robert Petfield, silvery mauve	5 Ernest Cannell, deep fawn
14 Mdle. Lucie Faure, creamy white	5 Golden Empress, golden yellow
14 James Agate, white	5 Bonnie Dundee, orange bronze
13 Miss Annie Hills, silvery flesh pink	

115 varieties.

VOTES FOR THE BEST TWELVE NEW JAPANESE OF 1902-1903.

27 Miss Mildred Ware, deep rosy cerise	8 Maud du Cros, pale straw, yellow in the centre
24 Mrs. F. W. Vallis, crimson, shaded apricot yellow	8 Alfriston, crimson purple
22 Henry Perkins, reddish crimson on yellow ground	8 Lord Hopetoun, crimson
19 F. S. Vallis, canary yellow	7 Donald McLeod, apricot yellow, shaded crimson
19 George Penford, crimson scarlet	7 Mrs. A. R. Knight, rich orange yellow
16 Miss Olive Miller, pink	7 J. H. Silsbury, bright terra-cotta, suffused yellow
14 Lady Couzens, rosy pink, silver reverse	6 Captain Percy Scott, deep yellow
11 Bessie Godfrey, canary yellow	5 Florence Penford, lemon yellow, chrome reverse
10 Lady Cranston, white, flushed rose	5 Miss Stopford, white
10 George Mileham, deep rich crimson	5 Countess of Arran, creamy buff, shaded pink
10 W. Duckham, pale mauve	5 Beauty of Leigh, buttercup yellow
9 Mrs. J. Dunn, white	5 Mary Inglis, terra-cotta, on fawn ground
—12	

84 varieties.

NOTES ON THE NEW JAPANESE VARIETIES.

The interest taken nowadays in the introduction of new and desirable varieties is so keen that I thought after a lapse of a few years it would be wise to again add this section to the audit. To obtain a selection of twelve varieties no fewer than seven dozen names are given, which is a proof of the wide range of observation taken by the electors. No one will say but that the first twelve is made up with an extremely fine collection of novelties, embracing a wide range of colour and maintaining the desired form of flower as well as petal. Several varieties just miss the distinction by a narrow margin of votes, although they possess all the qualities desirable. In many of these instances it is purely a question of want of opportunity to be seen more widely. As they will be in the hands of so many capable cultivators during the next season they will, no doubt, make their mark in 1904. Miss Mildred Ware easily secures the leading place with twenty-seven votes; the smallness of this number is explained by so many electors not wishing to take part in this part of the audit owing to a want of opportunity to see the various new varieties—a commendable desire too. That charming variety, Mrs. F. W. Vallis,

occupies a position—second—quite in keeping with its quality; no doubt it will depose the previously named variety after another season's trial. Lady Cranston, although coming out late in the season, was sufficiently seen to warrant its inclusion in the best twelve. That lovely white, Mrs. J. Dunn, obtains the coveted position which is just missed by Maud du Cros, a variety that has only to be seen to be admired. J. H. Silsbury and Beauty of Leigh also suffer in that way. No fewer than thirty-one varieties are named but once, thirteen receive two votes, twelve three. I think it will be generally admitted that there is a distinct shortage of what are known as new and desirable kinds outside of the select few as compared to some years. Raisers and cultivators exercise a greater supervision than formerly. A variety to make headway must have distinct points of excellence. A greater tendency to quality instead of mere size characterises the bulk of new kinds in any section.—EDWIN MOLYNEUX.

THIRTY SINGLE FLOWERING VARIETIES.

Earlswood Glory, pure white; Earlswood Beauty, primrose; Edith Pagram, rich pink; Captain Allsop, rich yellow.

Mrs. G. W. Forbes, rich purple maroon; Felix, terracotta; The Bride, pure white; Elsie Neville, crimson, terracotta; Kate Williams, yellow.

Jane, pure white; Lady Windsor, deep lilac; Miss Mary Anderson, blush white; Miss Annie Holden, pale yellow; Mrs. D. B. Crane, cerise pink.

Purity, pure white; Rev. W. E. Remfrey, crimson maroon; Oceana, peach blush; Sir Geo. Bullough, deep yellow; Star of Honour, white, cream centre.

Ewan Cameron, blush white; Thomas Suter, white, yellow disc; Princess of Wales, flesh colour, white ring at disc; Mrs. Henry Herbert, pure white.

Framfield Beauty, deep rich velvety crimson; Miss A. Edwards, white, flushed rose; Glorious, rose, base of petals white; Belle of Weybridge, rich chestnut crimson; F. W. Smith, rich glowing pink; Josephine H. Stallard, crimson red; Mrs. E. Roberts, lilac.

TWENTY-FOUR POMPON VARIETIES.

William Westlake, golden yellow; Rosinante, blush rose; Mrs. Bateman, orange brown; Mr. Sabey, bright golden yellow; Nelly Rainford, buff; Mdle. Elise Dordan, silvery pink.

Madame Marthe, pure white; Golden Madame Marthe, golden yellow; La Purété, white; Comte de Morny, purple; Black Douglas, dark crimson; Pygmalion, deep rose.

President, dark rosy crimson; Marabout, blush; Tous-saint Maurisot, rosy lilac; St. Michael, bright gold; Lizzie Holmes, canary yellow, tipped rose.

Adele Prizette, rosy lilac; Prince Victor, dark maroon; Osiris, rosy pink, edged gold; Klondike, bright yellow; Miss Ada Williams, white shaded blush; William Kennedy, crimson; Gallia, clear soft pink.

EIGHTEEN ANEMONE-POMPON VARIETIES.

Aglaia, blush white; Antonius, bright yellow; Madame Montels, white, yellow centre; Madame Chalonge, blush, tipped sulphur; Marie Stuart, blush, sulphur centre; Reine des Anemones, pure white, late.

Bessie Flight, rosy lilac; Briolis, rosy blush; Emily Rowbottom, white; Jean Hatchette, white, pale yellow centre.

Grace Darling, blush; Calliope, ruby red; Marguerite de Coi, blush, yellow centre; Mr. Astie, golden yellow; Meteor, crimson, scarlet and gold; Madame Sentir, pure white; Magenta King, magenta guard, yellow disc; Gem of Earlswood, citron.

TWELVE LARGE FLOWERED ANEMONE VARIETIES.

Lady Margaret, pure white; Gluck, orange yellow; Fleur de Marie, white; Acquisition, rosy lilac, yellow centre; Delamare, creamy white; Descartes, bright crimson red.

Mrs. Judge Benedict, sulphur, tinted blush; Mrs. P. R. Dunn, pure white; Mdle. Nathalie Brun, cream, tipped primrose; M. C. Lebocqz, citron yellow, tinted rose; Prince of Anemones, lilac blush; Miss Annie Lowe, primrose yellow.

TWELVE JAPANESE-ANEMONE VARIETIES.

W. W. Astor, salmon blush, centre golden rose; Mrs. H. M. Gardner, deep rose, tipped gold; Nelson, crimson purple; John Bunyan, rich yellow; Jeanne Martz, blush white, lilac disc; Sir Walter Raleigh, pale blush.

Madame Lawton, white and rose; Clara Owen, pale straw; Mrs. Bassett, lilac guard, yellow disc; Marsia Jones, pure white; Fabian de Mediana, lilac, purple and gold; Halcyon, pure white, extra large guard florets.

TWENTY-FOUR LATE FLOWERING VARIETIES.

W. H. Lincoln, orange yellow; L. Canning, white; Lord Brooke, bronze and yellow; Princess Victoria, creamy white; Tuxedo, terra-cotta bronze; Framfield, pink, rich pink; Etoile de Feu, brilliant red; Queen of the Exe, soft lilac pink.

Mrs. J. Thompson, chestnut bronze; Niveus, pure white; Red Lady Carey, bright red; Miss Anna Hartshorn, pink and white; Etoile de Lyon, lilac rose, shaded silver; Mrs. Alfred Tate, terra-cotta and gold.

The Queen, pure white; Sunstone, straw yellow; Madame Phillipe Rivoire, white; Miss J. Cottee, golden yellow; Lady Osborne, soft flesh pink.

Madame Edmund Roger, greenish white; King of Plumes, yellow; Progne, amaranth; Yellow Mrs. Thompson, yellow; Red L. Canning, dark red.

The "Daffodil King" on Tour.—No. 12.

(Continued from page 573.)

Again the scene shifts—this time to New Caledonia, which is a French convict establishment. The vessel had a quantity of coals to discharge here, which work occupied the greater part of a week, so that there was ample time to see the sleepy township, Burpos, and its neighbourhood, so far as strangers were permitted. The natives are not allowed to enter the town, and no prisoners are to be seen, except a few aged men who sweep the streets in the mornings. Soldiers in uniform were not to be seen, but at a café Mr. Barr met some officers in civilian dress. Our narrator says there is evidently a good deal of secrecy with this establishment, and he thought it would be well for the Australian Government to keep an eye on this French possession.

The place is strongly fortified, fortifications being placed on every point of vantage, so that, should there ever be a quarrel between France and Australia, the taking of all the forts would mean a very severe struggle.

From New Caledonia the ship sailed for the New Hebrides, calling en route at various islands to discharge cargo and missionaries. Mr. Barr was now within a few hundred miles of the Fiji group (which are even on a lower latitude), where he had voyaged not long previously, as these notes have shown. The tour to those of us who must content ourselves at home, seems a remarkable one, and gains in interest the further we trace it.

When off the island of Malokula, the passengers who desired to land and see the largest active volcano in the world were limited to six persons, as the natives have the reputation of being "man-eaters." The party applied to the mission station on landing for a guide; and the missionary tried to induce one or more of his people to accompany the explorers, but they one and all positively refused, as a war was then raging in the different villages. Later, however, after some further persuasion, one man consented, and at the first village the party was greeted by a sentry armed with a musket. No harm came from this source, and soon the head-man of the village was interviewed, and successfully, as it would seem, for he sent the sentry with Mr. Barr and his companions. They ascended to as near the mouth of the crater as possible, but not so close as to be able to look down upon the mass of burning lava.

Entering a second village, the party was taken in hand by another convoy, and so on from village to village, finding in most places men who could speak English had been to Queensland, at the sugar plantations. At the last village in the journey they were told that there were some English traders on the coast, and having requested to be taken to them they found two men (fortunately for the latter) who belonged to their own vessel, having come all the way from Sydney. Having refreshed themselves, the party set to work, and with the aid of a native crew they were soon back at the steamer, which they reached at four o'clock in the morning. They had been away twelve hours on a journey that ought only to have taken four hours. The captain was greatly rejoiced to welcome them back, as he had begun to despair of their returning.

The members of the vessel must have been real coral-island adventurers! Much climbing was done on Malokula, and on one occasion it was necessary for the natives to assist. Mr. Barr was being hauled and pushed up a steep place by means of a rope, when the head-man of the village, evidently feeling over-worked, exclaimed, "What for you bring this old fellow man up here?" Mr. Cheesman, the Melbourne nurseryman, who accompanied the veteran on this tour, was wont to call out "Cocoanut," when the natives procured for him green Cocoanuts; and he was able to consume so many that one observant islander was not slow to make an impolite comparison.

(To be continued.)

**Cattleya guttata Prinzl.**

This is one of the most distinctive Cattleyas we have, and the markings, as well as the form of the flower, are pleasing. The sepals and petals are delicate creamy yellow, spotted with violet, while the lip is of a bright magenta shade. It is found in a number of collections, while the species itself is well known.

Phalænopsis Mariæ.

This Orchid was discovered by Mr. F. W. Burbidge in the Sunda Isles, and bears the name of the discoverer's wife. The flowers (a small raceme of which is illustrated) grow in a lateral, drooping raceme, and are about 1½ in across. The sepals and petals are white, and have transverse bars of chestnut colour. The lip is deep magenta purple, margined with white. Messrs. Veitch were the introducers.

Notes on Vandas.

V. Parishii is a dwarf, stout growing species bearing large fleshy flowers on erect spikes. In the type these are yellowish-brown, but a higher coloured variety, V. P. Marriottiana is far superior. It likes ample heat and moisture. V. Roxburghii is the oldest Vanda in cultivation, the type species upon which the genus was founded. It is a tall growing handsome plant, bearing towards the top six to eight-flowered racemes of sweetly scented blossoms. These are greenish with lines and spots of brown on the sepals and petals, the lip violet. Fairly large pots or baskets suit it well, and it does best in an intermediate house.

The beautiful V. Sanderiana is certainly the finest in the genus, and one of the grandest Orchids in cultivation. In growth it resembles V. cœrulea, but the flowers are larger and of great substance. In colour they are rosy-pink, with a peculiar buff suffusion, the centre area crimson. It likes plenty of heat and moisture while growing, must be well consolidated in

**Cattleya guttata Prinzl.**

autumn, and kept in an intermediate house in winter. Small pots or baskets are best, and clean sphagnum and charcoal suffice for the compost. V. suavis and V. tricolor are noble exhibition plants, easily grown if given due attention. Although

the former named is supposed to be a variety only of the latter, it is the better of the two, the pure waxy whiteness of the segments being far superior to the yellowish tint on V. tricolor. They need plenty of head and elbow room, ample moisture both in the atmosphere and at the roots while growing, and an intermediate temperature. For cultural purposes V. teres and V. Hookeriana may be bracketed. Not every one has the convenience to cut them down and place a compartment entirely to them, and in such cases they do fairly well in the ordinary way, though nothing like the number of flowers will be produced. Although several species have been left out, the above named will make a very interesting and beautiful collection.—H. R. R.

The Week's Cultural Notes.

One often feels sorry for Cypripediums when in flower and afterwards at this time of year. There are Orchids that grow to flowering time, the blossoms forming the apex, as it were, of the

**Phalænopsis Mariæ.**

season's growth, and that require rest afterwards; but this is not the case with Cypripedium insigne and its hybrids, or many of them. At the time the flowers are forming in one set of growths another set is growing, and to stand the plants about in dry, draughty rooms and corridors, and yet expect a good flowering return another season, is going a little too far. Yet this is the fate of hundreds of plants at this time of year.

After a reasonable flowering time the flowers should be removed, as they will still last well in a cut state, and the plants, after a thorough cleaning and overhauling of the compost if this is necessary, should be taken to the growing quarters at once. An intermediate temperature with plenty of atmospheric moisture is what this section likes, and as soon as the roots are really active full supplies of water may be given. This will result in fine growth, with vigorous, healthy leaves and stout flowering crowns. If they rest at all it is in summer, and a few weeks' sojourn in a cool and lightly shaded airy frame is then advisable.

The present is a very trying season for small growing Orchids such as the Ionopsis and the smallest growing of the Oncidiums, and I am led to speak of these from seeing some pans of the pretty little O. tetrapetalum in flower recently. There is so little stamina in them, and our houses, no matter how well constructed, are often draughty, especially near the roof, where such plants are usually grown. When they have obtained a really good hold upon the compost or block there is less risk, as water can be safely supplied; but when, on the other hand, roots are few and weak, there is a danger of losing even these if an extra dose of moisture is given in dull weather.

These Orchids appear to me to relish a dry and wet time every day, rather than a wet and dry season at opposite times of the year. If it could be so arranged, I believe that every one of them would be better for being dry, say from an hour before noon till closing time in the evening, when a light dewing from the syringe would replenish the power wasted and form a restful moist atmosphere around them for the night. But this, of course, is impossible in most cases, and we must do our best by maintaining the temperature as even and regular as possible, and preventing draughts on the one hand and a stuffy heat on the other.—H. R. R.

Insects as Garden Adornments.

At this season of the year, insect life generally is in a state of repose, waiting for the expansion of the spring buds. Though a few insects there are whose habit it is to make appearance on occasional mild days during winter, some moths, for instance, and sundry species of the fly order. Beetles are nearly all dormant, yet they are amongst the earliest insects to foretell the approach of the growing—often blowing—season. Gardeners, however, in the course of their operations bring beetles into view about this time, turning them over with the soil, shaking them out of autumn flowers, in which they have found a shelter, and disturbing them from their winter quarters under the bark of trees. Many beetles also, during their larva or grub stage, may be found inhabiting solid wood, hollow stems and roots. It is not unusual to see in April some small beetle marching about with dents upon the wing-cases. These have been caused by the pressure upon its body, during the winter sleep, of contracting bark, and come out all right.

Ladybirds, of which we have a number of species, two being specially familiar to us, are beetles that did not have the first half of their name from their ladylike aspect, but because they were presumed to be under the guardianship of "Our Lady." They are small, but pretty insects, and of notable service to the gardener, also sometimes to the farmer, their favourite food being the aphid tribe on all kinds of plants. Probably they also eat some of the Acari or mites, which occasion us trouble at times. So far as we have observed, ladybirds hibernate under bark, amongst dry leaves, in nooks and corners, emerging during spring to start a new brood. We find them, however, active or semi-active, through the winter months in houses and frames, where they doubtless capture little insects that may be about. The commonest species is the two-spotted *Coccinella bipunctata*, the small brown grub, which is even more ravenous than the adult beetle. Next to it in abundance is the larger *C. septempunctata*, so-called, but the number of spots varies; occasionally we notice a specimen that has none.

Like most of its brethren, it exudes a fluid of an unpleasant odour, which had reputé as a remedy for toothache. These are useful, and not ugly, but there are prettier ladybirds to be seen in gardens, very serviceable. The eyed ladybird (*C. ocellata*) is generally found on trees; it has red wing-cases, upon which are eighteen black spots, each encircled by a yellow ring. Then another species can boast twenty-two spots, not always countable, and yet another species is sometimes a cream white with black spots or black with spots and streaks of red.

Many of the long-horned beetles, of various sizes, that are active in the summer sunshine, running over leaves or flowers, and climbing stems, are living now as fat, muscular grubs under bark, or in decaying wood. Those of the wasp beetle, or *Clytus arietis*, white, flat, with small horny heads, often tumble by scores out of some old garden post that is being pulled up as useless, because they and other insect borers have reduced it to rottenness. June is the month to see the beetles in full vigour, skipping amongst the foliage, and they certainly have a wasp-like appearance, and go about in a fussy style.

The arrangement of colours is pleasing to the eye, the head and thorax being black with a yellow ring. On the rich brown of the wing-cases are three yellow bands, a spot, a narrow line, and the tips are also yellow, the rather long legs are pale chestnut. Another lively and elegant wood beetle we know only by its Latin name of *Strangalia elongata*; it is very partial to the flowers of umbelliferous plants. It has a long thorax and tapering wing-cases; the colour is pale yellow, chequered with black and brown. Under bark feeds the grub of the handsome beetle (*Ædemera cærulea*), of a greenish blue tint, which has remarkably stout hind legs, suggesting a leaping power, which the insect does not seem to exhibit.

One of the chafer beetles familiar to gardeners, if not always known by name, is the June bug, Bracken clock, or "Cocker-bundy," this last being an odd contortion of the Welsh "Cock-y-bundu," it is so called by anglers, who find it a good bait. Its scientific name of *Phyllopertha horticola*, tells us it is a frequenter of gardens, and though in the open it may hide amongst the Fern or Bracken, it attacks the flower or foliage of various plants, and, appearing early, it sometimes damages the buds of fruit trees, while expanding. Its destructiveness checks our admiration of its beauty, yet it is a pretty insect, the head and thorax being of a green tint, the wing-cases reddish brown. The larva is also one of our foes, since it feeds upon the roots of grasses, probably those of the Potato and other garden plants occasionally suffer. Larger and still handsomer is the Rose beetle, another of the chafers which haunts flowers, especially those of the Privet and Rose, but it does not seem to cause damage, like the preceding species.

This beetle (*Cetonia aurata*) is of bright golden green, adorned with white streaks on the wing-cases. As it flies it produces a humming sound, and it is the habit of the species to assemble in parties, when the sun is shining. It is curious that the grubs are sociable, too, being found sometimes by scores

on decaying trunks or roots. We once noted the occurrence of numerous beetles in a market-garden, which indicated that the grubs had fed on something there. They grow very slowly.

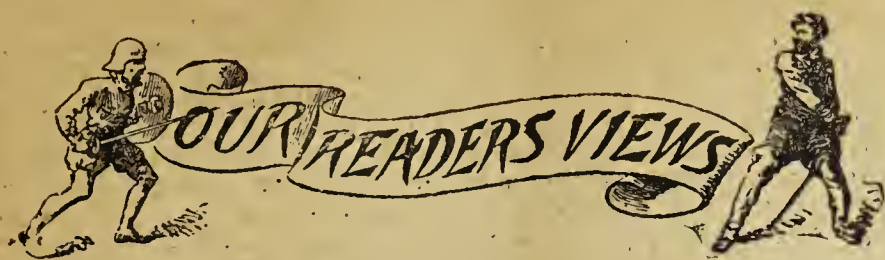
Besides the troublesome beetles, of which there are many handsome or plain, that we must now pass by, we have our friendly species, that are working actively for our benefit a good part of the year. Both in the larval and mature state the ground beetles are carnivorous. The black and muscular larvæ are feeding now underground, seizing a variety of insects, amongst them the wireworm; they also eat small worms, so that it is well not to kill them, if they are known to us. Early in spring, the beetles are abroad, they have no wings, but are very agile in running, with digging powers, too. An abundant garden species is *Carabus monilis*, it has a copper-hued thorax and metallic green wing-cases, which are adorned by little ridges or points, which suggested the name. The sun beetles, particularly of the genera *Amara* and *Pœcilus*, hide amongst clods and stones during winter; mostly they are of bright colours. It is considered unlucky to kill one, and they are useful, though some of them are guilty of attacking ripe Strawberries. Gardens having grassy spots and shady nooks may be found in summer or autumn musical with the sounds of crickets and grasshoppers; not unpleasant to most people. One amusing circumstance is that the chirp or call is not easily traceable to the direction from which it comes. Just now insects of this tribe are mostly in their early stage of life—silent, and probably torpid.

These insects, the crickets especially, exhibit to us Nature's violin, for in the wings we see the bow, string, and sounding-board, variations in the notes of different species arising from the size or shape of the ridge, which is the bow, and that of the drum or sounding-board. The elegant great green grasshopper is the largest, the handsomest, if not the loudest of our British species of the tribe. Leaving copses and hedges its chief resorts, this insect will come into garden precincts, perhaps for a change of diet. Though it is a feeder on leaves, the willingness it shows to eat bits of raw beef when in captivity makes us surmise it may sometimes devour other insects. It is full 2in in length, with long antennæ, and is of very beautiful green colour, which fades when the insect dies. A small brown species of grasshopper is not uncommon about gardens, occasionally jumping upon some by-passer.

Sometimes a party of field crickets settle in a garden, where they find a dry bank having rather loose earth, in which they can excavate their burrows, often a foot deep. Each insect sits during the day at the opening of its burrow and chirps, coming forth to feed after sunset. It is not unusual for a field cricket to enter a house, and I am inclined to think that the house cricket occasionally goes out into the garden when the weather is warm.—ENTOMOLOGIST.

A Commendable Method of Teaching.

In pursuance of his duties as instructor in horticulture to the Cornwall County Council, Mr. C. Hott has commenced the practice of taking parties of gardeners and others interested in gardening to private places, and there lecturing on the various features while moving through. Of course, permission is first obtained. Recently at The Rookery, Marazion, he described the success which had attended the fruit culture in connection with the technical gardens at Gulval; and what had been done there could be done at Marazion, where the climate and soil were most suitable to the production of the best results in fruit growing. The selection of trees was treated, practical demonstration being given in tree planting, and the lecturer's remarks on pruning were more fully explained by the effective use of the pruning knife. Air and light were great factors in the proper development of healthy, fruit-bearing trees; under no circumstances should strong dressing be added to newly-planted trees, and damaged roots should be removed before planting by being cut back. Proceeding to the fine Peach wall, the lecturer dealt exhaustively with the planting and pruning of Peach trees, pointing out the advantage of summer pruning for fruit-bearing purposes. The lecturer also dealt very effectively with the selections and culture of Potatoes, remarking that he regretted that in Cornwall so little attention was given to the growing of late Potatoes. There ought to be sufficient good quality Potatoes grown in the county to supply the county. This could be well and lucratively accomplished. Attention was then drawn to the advantage which market gardeners would derive by the cultivation of Asparagus, which crop is inexpensive, but very profitable as well as continuous, requiring very little attention, and when once planted would continue for forty or fifty years. Peas were next dealt with, the lecturer expressing himself favourable to the Marrowfat type; and for dwarfs, his own preference was for William Hirst, Crosley Gem, Sherwood, and British Queen. The lecturer concluded with an eulogy as to the splendid condition of the gardens, which reflected greatly on the skill of Mr. Matthews, the head gardener, and his assistants.



Trade v. Private Exhibitors.

On seeing a catalogue of Chrysanthemums sent out by a prominent Wiltshire grower, it struck me as rather remarkable that such men were allowed to enter into competition with private gardeners at the various exhibitions held up and down the country. I do not know what the feelings generally are with exhibitors in this respect. Personally, I think it is entirely out of order.—FAIRNESS.

[Such matters entirely depend on the rules and wording of the schedules. If these do not specifically debar the Trade, then must the private gardener be prepared to encounter the commercial growers, and if they can be beaten, as they sometimes are, then the private man wins the greater honour.—Ed.]

Violets, Princess of Wales and La France.

That Princess of Wales takes up a great deal of room (as stated on page 554), and that we should prefer smaller leaves and shorter leafstalks, which would allow us to get more plants into the frames, has long been recognised by Violet growers. I therefore, for one, welcomed La France as being just what was wanted in this respect, and during the winter before last tested it against Princess of Wales. The result was that I was able to get a third more plants of La France into a frame than I could of the other; but as Princess of Wales, even then, produced decidedly the greatest number of flowers per frame during the winter, I have discarded La France.—W. R. RAILLEM.

Mealy Bug v. Hose.

This loathsome "insect," such a degrading and dreaded pest to the gardener, cannot easily endure the force of cold water drawn from the hydrant and passed through small bore hose pipe. But it might be said the mealy bug is that insidious, resourceful sort of insect that even with the hose pipe turned on his haunts it will evade some of its cold force. Many a young gardening probationer has spent hours of uninteresting labour on an effort to rid Vines and plants from mealy bug, and many times it would seem to him impossible for even a stray insect to remain in possession. Disappointment has awaited many after a short lapse of time to find the old enemy still in evidence, demanding further retaliatory measures to be taken to combat him. Mr. Nash, so long and so honourably associated with Badminton, once assured me that the hose, with plenty of water force, would he hoped be to him a "haven of rest" from the constant worries bug had given him in his vineries in the past. The water supply prior to this date had been totally inadequate, and local in its source; but since water is now laid on from a company's mains, to use his own words "Conveying a force sufficient to drive all the glass out of the roof sashes," he became fully convinced that the mealy bug had but a short life allotted to it at Badminton.

Calling on Mr. Rye, Captain Belfield's gardener at Frenchay, more recently, I found further proof of the efficacy of the hose pipe, and in this instance repetition with cold water alone maintains freedom from infestation. Mr. Rye is a successful grower of specimen stove and greenhouse plants, and among these necessarily Crotons occupy a due prominence. With a mixed collection of plants, and some of them of tender foliage, it needs no stretch of imagination to remember or to understand that all cannot be dealt with on similar lines, hence plants once clean may soon be infested by stock that affords cover, because the delicate nature of their leaves demands individual treatment.

Periodical "bouts" with the hose is made on Crotons of all sizes, and particularly the large specimens. These are taken down from their elevated stations, carried outdoors, and laid on their sides, and the cold water bath zealously applied at every angle. This is even continued into the winter and spring seasons, choosing, of course, a sunny or mild day for the work. Heavy though the work is, it is infinitely preferable to sponging, which must be extended over such prolonged periods. The hosing can be carried out in a few hours, and the extirpation of the mealy bug may be felt to be assured for a time without any further expenditure of labour or material. Roof-trained Stephanotis are another fertile source of mealy bug, and providing the roots and soil can be protected from the cold water deluge, and other plants growing beneath removed for the time, the hose may do as useful execution in the case of these as with

Crotons. High water pressure, however, is the one desirable element, it matters not whether the water be hot or cold so long as there is the continuous and forcible stream to play on the insects from every possible direction. Needless to say it is only hard-leaved and hard-stemmed plants that submit to such drastic measures.—W. S.

Ailantus as a Town Tree.

The Ailanto, or *Ailantus glandulosa*, of which some 250 specimens are about to be planted in Kingsway and Aldwych, is a Chinese plant which is very hardy in England, and will probably be able to survive even the smoky atmosphere of London. It is largely used as food for the Ailantus or Cynthia silkworm, and is as ornamental as it is useful. It is a stately tree, with a straight trunk and magnificent foliage, the leaves being often more than three feet in length. The Russian Government has planted a number near Odessa, and it appears to be the best tree for growth on the steppes. In France it is used as a timber tree, thriving on chalky soils. Probably no better choice could have been made for beautifying two of the finest streets in London or the world. Nevertheless, at certain seasons it gives off a most loathsome odour. It is to be hoped that the L.C.C. will consider this point before committing themselves to what would be a public nuisance. The name of the plant is not formed from the Greek, as one is tempted to think: it is an approximation to the original Chinese name. Owing to the odour referred to, no insects infest it.—F.

A Critique on New Potatoes.

As a Potato grower in a modest way, I agree with Mr. J. A. Simpson (page 400) that "The Factor" is a first class variety; but on my heavy soil the past season tried it sorely, and my crop was diseased more than it would have been. On other points it compares most favourably with any high priced novelty, and it would not be out of the line to say that it, along with Evergood and Sir J. Llewelyn are the best for the garden. Respecting the remarks of your Home Farm correspondent (pages 409, 410), I may say that according to my tests the Northern Star by no means equals Mr. Findlay's previous sorts. Royal Kidney is a remarkably productive variety, equalling Evergood in that respect, although it showed about 10 per cent. of disease against Evergood's naught. In quality, however, it surpasses Evergood, being beautifully mealy, and requires less cooking. As to Sir John Llewelyn, which, by the way, I was told was a Welsh introduction, it is by far the best early of the day. But earlies should not be grown as late suppliers. It, however, does not equal Duke of Rothesay in quality, which is really superb. The tubers are large, but it tends to disease more than the above varieties if left in the soil. Respecting Up-to-Date there were, and are, men who consider it a bad flavoured Potato. I myself have discarded it owing to its poor crop and blightiness. In Lines. terrible reports are to hand of its present rotten state in the clamps (pies). As to size, Sir John Llewelyn and Royal Kidney can grow large, at least they scored over the "Star" in that respect, and a market man I am acquainted with grew the "Sir John" for stock-raising, and he is complaining because all his stuff is so large, being 4 in to 6 in in length; but I may say he cultivates his ground well.

As to the big yields mentioned by Home Farmer, 6 tons to half an acre is not large. I have bonâ fide reports of Northern Star in Lines. coming up at 14 tons and 18 tons to the acre; Evergood at 18 tons per acre; and King Edward VII. at 18½ tons per acre; and by his own showing Evergood runs up to 15 tons, which at 16s. per cwt. works out at a fair figure, and I dare hazard that were he to plant his crop again the yield would pay better than the same value, viz., £140 worth of Northern Star. As for Ninetyfold, it has a peculiar trait of coming very ugly, and especially was this so this season. It is a heavy cropper and very fair quality, and for some reason does not drop below 16s. per cwt. Personally, I shall drop it. As Home Farmer remarks, King Edward VII. is a heavy cropper and of large size, but this season made it come coarse, except on poor soil, when the tubers were like wax models. The colour should not be against it any more than Beauty of Hebron, which is still grown for market, and I hazard a guess that King Edward VII. has a little Beauty blood in it, although so much more vigorous. We cannot, however, learn its pedigree, for the raiser (a Durham gardener) is now dead. A couple of tons of it were recently sent to Spitalfields Market and it sold immediately, the buyers coming next day for more; but as they merely sent it as a feeler, no more were to be had. As to quality:—From tests I have made, both at lifting time and recently, it is very good; but not so mealy as Beauty of Hebron. Northern Star, which I tested alongside of Dobbie's Favourite, was many points behind in flavour, and to my mind it will not gain a hold like Up-to-Date. The Crofter is a very superior-flavoured Potato, being the best of all bar a pair of 1903 novelties.—GROWER.

* * * Numerous letters are held over.



The Sea Buckthorn.

Hippophæ rhamnoides (the Sea Buckthorn) delights in a moist soil, and planted in a mass it forms an appropriate object for the waterside, whether pond, lake, or stream; in summer the leaves cast a silvery sheen over the water, while the berries in winter form orange-coloured ropes along the branches. The current year's branches are covered with minute scales, and these furnish exquisite objects for those who are fortunate enough to have a microscope.

A Garden at Ayr.

The garden is that which surrounds the magnificent and beautiful statue to Robert Burns at Alloway, distant two and a half miles from the "Toon o' Ayr." Electric tramcars convey thousands of visitors and excursionists to the Monument during each of the summer weeks, and those who have had the enjoyment of a journey there must have felt gratification to see the garden of flowers that surrounds the architectural memorial. I was informed by the ticket collector that further extensive additions are to be made. A hotel with tea gardens has been provided close by—between Alloway Kirk and the Auld Brig o' Doon, and the spot has become a place of traffic for many unintelligent roysterers.

Yew hedges are planted about, and give an air of cosiness and peace to the garden, and here one finds Tree Pæonies, Rhododendrons, Thujopsis dolabrata, Cryptomeria elegans, also Gynarium or Pampas Grass, Aquilegias, Negundo aceroides, Arbutus in berry, variegated Elder, Veronicas, Antirrhinums, Roses, Clematises, Chrysanthemums, Violas, and "Geraniums," all in the pink of condition. The Burns Monument was erected in 1820 by public subscription, King George IV. heading the contribution list with fifty guineas. The Monument and gardens are now under trustees, and a charge of 2d. per person is made on entry.—W.

Jumping Beans.

The so-called "Jumping Beans" of Mexico, California, and Brazil are neither round or triangular; they are a sort of go-between. They remind one of an unroasted Coffee bean, a Cherry-stone, a flattened Pea, or a Beech nut. Generally at first, when they are exposed to view, the onlooker's face is full of gloomy doubt; but this soon gives way to impatient curiosity and satisfaction as the yellow-grey seed-like bodies dash themselves against the sides of the box, or send the others spinning round by being dashed against them. And all the time the unseen impulse is from within, and this is what makes the plantlets look alive, and to possess definite will power. If a large portion of the rounded part be cut away, the real cause of the drumming and dancing will be seen to be a little moth, not half so formidable as its scientific name—*Carpocapsa saltitans*. The tapping of the moth's tail against the sides of the Bean supplies the dynamic. They soon travel across a heated plate, or table top, causing immense fun. They are just the thing to supplement or take the place of a parlour game during the winter evenings. By this jumping they get away from the parent trees, but whether this is for the safety of the moth or the dissemination of the seeds I am unable to say. Their movements and tappings are even more mysterious than those of the "fortune telling" fishes made of gelatine paper—another very interesting and instructive plaything. As to how the insect finds its way into the interior of the Bean, the generally accepted theory is that the moth lays its eggs inside the fruit or seed, while the structure is soft and cellular, and before the covering grows over the eggs, gradually becoming dry and hard and woody. Others suppose that they give another beautiful example of symbiotism, and others for the protection of the moths from their enemies, or for the dissemination of the seeds, as previously hinted. They live for many weeks in their peculiar seclusive home. The writer's supply came from Wiles' Bazaar, 38, Market Street, Manchester.—S. FIELDING.

Yuletide Flowers.

Our centre illustration this week shows what a considerable variety of exotic flowering plants there are in general culture. Cyclamens, Carnations, Bouvardias, Stephanotis, China Primulas, Ericas, Roman Hyacinths, Violets, Camellias, and many other sweet flowers, too numerous to name in this place, are in evidence. A glance at our list of subjects in the market list on a back page serves to show what choice the flower buyer has, and the lists we lately published of plants flowering in the greenhouse at Kew will further emphasise the fact that even at Yuletide there need be no scarcity of beautiful and fragrant blossoms.

Christening a Rose.

A new variety of Rose, raised in Michigan by a nurseryman named Breitmeyer, and which has received eulogiums wherever shown during the last few months, has been formally christened, and bears the name of La Detroit. The following paragraph from a Chicago contemporary makes interesting reading:—"The mayor . . . then introduced Katherine, the little seven-year-old daughter of Mr. and Mrs. Philip Breitmeyer, who, standing on a pedestal, formally christened the Rose by the sprinkling of champagne on a vase of specimen blooms and reciting the following: . . ." We would add that a great banquet followed, and long orations flowed.

New American Carnations.

The F. Dorner and Sons Company, of Lafayette, Ind., offers two highly meritorious novelties this season, namely, Lady Bountiful and The Belle. Both are white, and have been highly spoken of as commercial varieties, the former having earned especially favourable comment. Amaze, the dazzling scarlet seedling, which Jerome Suydam, of Flatbush, N.Y., will disseminate the coming season, gives good promise of being a remunerative Christmas Carnation. It is well known that a scarlet variety must do most of its work previous to January 1, as after that date the colour finds but little demand. Mr. Suydam's houses at present are fairly ablaze. The flower is of medium size, but all the other characteristics required in a Carnation to-day appear to be present, and it is growing equally well on shallow bench and solid bed. The variety is now in its fourth year.

Rhubarb.

In clearing off my Rhubarb bed recently, says a writer in "The Gardener," I found some of the crowns decayed; this indicates that the bed is getting worn out and requires renovating. The first thing to be done is to select a suitable piece of ground and trench it from two to three feet deep, working in a quantity of decayed manure and leaves, as when once a bed is planted it is not easy to manure, other than by surface dressing. If it is thought that the old bed will only give sufficient to supply the following season, it will be found better to purchase strong crowns of varieties like Early Albert, Hawke's Champagne, or Victoria, the first and second named to be planted not less than 2½ft apart every way, and the latter 3ft to 3½ft. When planted, give a good mulch over the crowns—in fact, old beds should have a good coating of manure in autumn, as it protects the crowns, and the rains carry the food to the roots. It will be wise not to pull any the first season, but let the plants go on to strengthen root and crown, which will greatly increase subsequent production. Always use judgment in pulling—that is, not pulling every stick, as done by many, especially among cottagers and allotment holders, as this results in the crowns being ruined. I consider that more Rhubarb should be grown, particularly by cottagers; for, looking at the matter from a profitable point, one can say that no other crop gives such good and sure returns. If the good housewife looks ahead to winter, she will not hesitate to make a quantity of preserves for her family, especially in a season like the past, when there is a scarcity of most fruit. Those who have heated houses are in a better position, as a supply can be forthcoming by Christmas, when it will be most appreciated. The space under stages is often wasted, but if strong crowns are procured and put in boxes, pots, or even stood on an ash bottom under the stage, with soil thrown over them, they will give an early supply of Rhubarb with a minimum of trouble.



Yule-tide Flowers.

NOTES & NOTICES

Mistletoe at Hampton Court.

At Hampton Court Palace Gardens large quantities of Mistletoe are growing upon the Lime trees fringing the Lime Walk in front of the Palace. Of the scores of trees forming the avenue, there is scarcely one that does not bear several fine bunches of the plant, but all are practically out of reach, some growing on the boughs as high as fifty feet from the ground.

Beautified Railway Stations.

The Midland Railway directorate give £2,300 per annum as awards for the best kept platform gardens on their system. This year, out of 187 prize-taking stations spread all over the line, Malvern Wells secures the premier honours, and Matlock Bath and Five Ways are adjudged equal for the second position, and Belper and Eekington West for the third place.

Royal Horticultural Society.

The first meeting of the committees of the Royal Horticultural Society in 1904 will be held, as usual, in the Drill Hall, Buckingham Gate, Westminster, on Tuesday, January 5. An election of new Fellows will take place at three o'clock. To prevent misunderstanding it may be mentioned that the committees of 1903 do not vacate office until the date of the annual meeting, 1904, and in like manner all Fellows' tickets of 1903 are available until the end of January, 1904. At a general meeting of the society held on Tuesday, December 15, seventy-two new Fellows were elected, making a total of 1,412 elected since the beginning of the year 1903.

Reading and District Rose Society.

The first meeting of this society was held in the Mayor's Parlour, Town Hall, Reading, on the 18th inst., the president (Mrs. Benyon, Englefield House, Reading) presiding, there being a large attendance of members. The report of the committee and balance-sheet of the treasurer were quite satisfactory; the latter showing a balance in hand of £11. Mrs. Benyon was re-elected president, and Mr. W. L. Walker honorary secretary and treasurer. The chairman of the committee is Mr. J. T. Strange, of Aldermaston, Reading, a well-known rosarian; and the committee, which is a strong one, includes the Revs. T. Page-Roberts, Alan Cheales, and C. S. Turner, with Messrs. R. C. Mount, Rigg, Dunlop, and Ashby, all successful growers and exhibitors of Roses. It was decided to hold the annual show in 1904 on July 13, in the Abbey Ruins, Reading, on the site of the exhibition of the southern section of the National Rose Society in 1896. It is held that this was formerly the banqueting hall of the monks of Reading Abbey, and it is quite a unique spot in which to hold such an exhibition.

British Fruit Culture: Committee of Enquiry.

"At last!" our readers will say when they read the following paragraph. Yes, at last a Government Committee of Inquiry into the state of British fruit culture is about to be made, and no newspaper in these islands has more consistently and persistently advocated the need for energy in relation to our national fruit supply than has the *Journal of Horticulture*. The President of the Board of Agriculture and Fisheries has appointed a departmental committee to inquire into and report upon the present position of fruit culture in Great Britain, and to consider whether any further measures might with advantage be taken for its promotion and encouragement. The committee is constituted as follows:—

Mr. A. G. Boseawen, M.P. (chairman);
Mr. C. W. Radcliffe Cooke;
Mr. J. M. Hodge;
Colonel Charles W. Long, M.P.;
Mr. George Monro;
Mr. P. Spencer Pickering, M.A., F.R.S.;
Dr. W. Somerville, an assistant-secretary of the Board of Agriculture and Fisheries;
Mr. Edwin Vinson; and
The Rev. W. Wilks, M.A., secretary of the Royal Horticultural Society.
Mr. Ernest Garnsey, of the Board of Agriculture and Fisheries, will act as secretary to the committee.

The Potato Boom.

Messrs. E. W. King and Co., of Coggeshall, have just paid £300 for 2lb of the new Potato, Eldorado, which is causing a sensation all over England.

"Corner" Formed in Pears.

The failure of the Pear crop this year in nearly every European country has given America an opportunity of forming a "corner" in this kind of fruit, according to certain daily papers. It is stated that more than 1,000,000 boxes of Pears have been kept in store in the United States.

The Horticultural Club.

The next house dinner of the club will be held on Tuesday, January 5, at 6 p.m., at the Hotel Windsor. Mr. George Gordon, V.M.H., has kindly promised to read a paper entitled "The Experimental Garden of the Future." Members are reminded that subscriptions for 1904 become due on the 1st January next, and should be paid to the honorary treasurer, Mr. Harry J. Veitch, 34, Redcliffe Gardens, South Kensington, S.W., or to Mr. E. T. Cook, honorary secretary.

Obituary: Mr. J. H. Fitt.

It is with much regret that we have to record the decease, after a long and painful illness, of Mr. J. H. Fitt, at Welwyn, Herts, at the age of 73, he having been born at the same place on November 1, 1830. For no less than 54 years he had charge of the Frythe Gardens at Welwyn, after commencing his career as a gardener at Stagenoe Park, whence he went to Bayford Bury, Hertford, to the famous gardens of Mr. Baker, subsequently serving under Messrs. Paul, of Cheshunt, up to the time of his long engagement at the Frythe. For some years, until his illness incapacitated him, he formed one of the R.H.S. Floral Committee, where his kindly face will be much missed. Combined with a thorough knowledge of horticulture in all its branches was a special acquaintance with our native Ferns, of which he had a large and choice collection; and in this particular cult he will be equally missed by a host of sympathetic friends.—C. T. D.

General View of Gardening Societies.

The *Burgess Hill* (Sussex) Horticultural Mutual Improvement and Chrysanthemum Society enjoyed a festive meeting on Tuesday, December 15, at Burgess Hill Inn, where an excellent supper was served to a company of between forty and fifty, Mr. G. A. Hammond presiding.—The annual dinner under the auspices of the *Nottingham and Notts* Chrysanthemum Society was held on the 17th inst. at the Rose of England Hotel, Mansfield Road, Alderman C. Bennett, president of the society, taking the chair. The Mayor of Nottingham, in replying to a toast, said he was an enthusiastic gardener, and he was pleased to note the immense progress that had been made in the cultivation of the Chrysanthemum in Nottingham. He had been associated with the majority of the local horticultural societies, and was a member of the committee of the great horticultural show held in the Park some thirty years ago. Also he had been connected with the old St. Ann's Society, and was one of the founders of the present Nottingham Horticultural Society. Nottingham held a pre-eminent position in regard to gardening and the culture of flowers and fruit, and it was his sincere hope that the city would always hold that position. He hoped the Society would have a long and successful career.—The third annual dinner held under the auspices of the *Kingswood* (near Bath) and *St. George's* Horticultural and Fanciers' Association, took place on December 14, evening, at Kingswood Hotel, when there was an attendance of about seventy. Mr. H. Furber, president of the Society, occupied the chair. The Society has had a successful year, and has a balance in hand of £18. Larger prizes are being offered. The show is one of the best in that district. The president urged caution, however, in the dispensing of funds, and desired that the tradespeople would take a deeper interest in the Society. Its influence brought much good.—A meeting of the *Mortimer Society* (near Rea) was held at the house of the secretary on the 3rd inst. The treasurer (Mr. W. A. Wallis) presented a balance-sheet for the past year, showing a surplus on the year's show of £12 3s. which, added to the balance from last year (£13 14s.) gave a total to carry forward of £25 17s. It has been decided to hold the next show on Thursday, July 21, at the same place as before.—The committee of the *Bolton* Horticultural and Chrysanthemum Society, which has a membership of about eight hundred, held their annual dinner last evening at the Commercial Hotel, the proceedings being graced by

the presence of His Worship the Mayor (Councillor Jno. Heywood M.A.) In an approximate financial statement, Mr. Smith said that the receipts for the year amounted to £292 16s. 9d., and the expenditure to £274 10s. 7d., leaving a credit balance of £18 6s. 2d. There was an account of £10 to be considered by the committee. On the first day of the show £21 19s. 9d. was taken at the doors, and £80 10s. 6d. on the second day, the total being a decrease of over £6 on last year. In subscriptions, £160 was raised, and £145 13s. 6d. was given in prize money.

Fruit Notes.

Fruit at Christmas.

The festive season of 1903 finds us all too badly provided with supplies of home-grown hardy fruit. Many of us must look in vain for the Blenheims and Cox's, or the Newton Wonders, for the kitchen. Sad also is it to note the absence of our old friend Glou Morceau and other late varieties of Pears that have been wont to lie on our stone shelves at this festival time.

That gardeners have commiserated with each other upon the dearth of fruit generally is well known, and it may seem scarcely necessary to enlarge upon an anything but cheerful subject at what should be the most joyful of occasions. Living in a fruit-growing district, where as a rule Apples may be purchased at a very low rate, it is certainly not inspiring to find they cannot be bought at less than fourpence per pound. What the retail price of good English Apples must be in large towns I have no means of knowing; doubtless the foreign supplies prevail, but in small centres sales are too slow for vendors to deal with these in bulk. Pears are conspicuously absent from the windows of local shops, yet the price of those from abroad does not appear prohibitive in the wholesale markets if one scans the lists of prices in various publications.

Turning from the scarceness of hardy fruit, it must be matter for congratulation to the consumer to find really good home-grown Grapes at the low figure of but one shilling per pound. Really capital black Grapes can be procured for this small sum; whether the growers are to be congratulated on their returns is a question open to some doubt. Heavy crops may, and probably do, afford a small margin of profit at such a price; compare this, however, with Apples at fourpence, and it is not difficult to decide who has the advantage in the way of profit—comparing the grower of Grapes and the grower of Apples; but this year is exceptional, and happy indeed is he who holds a few bushels of really first-rate dessert or culinary Apples. And this is where the foreigner steps into the breach, sending us heavy consignments and reaping a rich harvest of British money.

There is some compensation to the poorer members of the community to find dried fruits—which form so large an addition to our Christmas fare—are cheap and good. From time immemorial it has been our custom to import these, not alone, it is true, for this season, but for various dietary purposes throughout the whole year, but more especially in winter, when our own fruit supplies are usually at a low ebb. Many of these dried fruits we shall doubtless continue to buy from foreign sources, but some of them we ought to be able to dry and preserve ourselves. Why can we not so treat our Plums in years of glut that ample stores may be at hand for disposal at this period?

Of course we all know the answer to such a question. But surely we ought to be able to dry, store, and vend at an equally low rate with our Continental rivals, who not only do this, but send the fruit hundreds of miles by sea and land to market. No! we go on, year after year; the same old arguments are trotted out, for and against. In the meanwhile, in seasons of plenty or over-supply, tons of fruit rot upon the ground which at this and other times would form a most wholesome article of food.

It is to be feared I am in some measure digressing, but a little latitude may well be allowed at Christmastide; and while upon the subject of preserving fruit, I should like to refer to the short article by Miss Bradley in the last R.H.S. Journal on bottling various fruits. We are here shown that for what cannot fairly be called a heavy initial outlay we may provide ourselves in years of surplus, very cheaply, with fruit for times of shortage. It has been conclusively proved that, when successfully bottled, fruit will keep fresh and good for many months. Putting aside the market aspect, there is here given us much to reflect upon from the point of view connected with private use. Why should the Briton continue to pay a heavy price for what he can grow and preserve for his own use at very little more expense than the cost of one of the machines depicted in the article to which I have referred?

Granted that in some few large establishments there is a certain amount of bottled fruit at hand for almost any occasion, yet the great majority of people, if they wished to indulge themselves with a Gooseberry tart on Christmas Day, would cer-

tainly need to buy from a foreign source, even though the fruit came through their family grocer. Apricots, Peaches, Tomatoes, Currants—in fact, all kinds of fruit—may be so treated at home as to be available in all times of scarcity; and still we go on buying from abroad when it is so unnecessary and the money is needed in our own land.—SANTA CLAUS.

(To be continued.)

Productive Tomatoes.

A variety of Tomato that has established a good record for both market and private use is Lister's Prolific. No variety that I have yet grown or seen surpasses this for indoor culture, and for outdoor use Holmes' Supreme makes an excellent companion. In a small span-roofed house which accommodated thirty plants in nine-inch pots, and these trained up the roof wires, something like 400lb of fruit have been gathered, all of good quality, shape, and colour (see illustration). The first picking weighed 60lb, and in the same week a quarter of a hundredweight more were added. The pots stood on a corrugated iron staging covered with cinders, and these being kept moist from the growth of other plants in summer beneath the Tomatoes, afforded an auxiliary feeding ground for the Tomato roots.

It is doubtful whether the same quantity of fruit would have resulted from planting in the border at the regulation distances apart and supported with stakes or string; and while a good crop of Tomatoes has been provided, there has been a use for the stages permitted for the growth of other pot plants without hindrance all the season through. This little structure measures but 20ft long by 12ft wide, running north and south, and for Tomato culture affords the requisite conditions for setting and ripening to a remarkable degree. They were sown in January and photographed at the end of July, and by the end of September cleared out again for plant accommodation during the winter months.—W. STRUGNELL.



Tomato, Lister's Prolific.

Societies.

National Potato.

SUMMARY.—A society has been formed. Earl Rosebery will be invited to become president. Mr. A. D. Hall, of the Rothamstead Experiment Station, is chairman of the executive committee, and Mr. W. P. Wright is honorary secretary. There will be trial plots in a large number of counties. The membership subscription is 2s. 6d. per annum.

The meeting which had been called at the Hotel Windsor, Westminster, London, on Wednesday last, was presided over by Mr. A. D. Hall, Director of Rothamstead, and over forty persons from the north, south, east and west attended.

The speaking was left to a few—not that there were not plenty of willing speakers, but the formation of the society was a foregone conclusion, requiring no argument, and the objects were so embracively included in Mr. Walter Wright's resolution that further discussion at the moment was superfluous. The Chairman having spoken at some length, the proposer of the resolution took the floor, and what with quotations from a huge bundle of letters which he had received from representative men in all parts of the kingdom, he occupied the attention of the meeting for over half an hour.

We can only allude to a few leading points. It was stated that we imported £2,000,000 of Potatoes during the past year that might be grown at home. Then there are other and newer diseases than the familiar and dreaded *Phytophthora blight*, which demand special attention. There is also the question of better classification of varieties for exhibition purposes, and a central body for appeal in cases of doubt or dispute. Then, again, much time and money would be saved to market men and other growers if new varieties were authoritatively tested in many different soils and localities. These things the society proposes to keep in view and to work upon.

The resolution was to the following effect:—That this meeting is of opinion, having in view the importance of the Potato as a cropping plant yielding food product, and the diseases to which it is subject, also the need for classification and trial of varieties, that it is desirable to form a society, and agrees to the formation of the same.

Mr. Wright also included in the resolution the names of the officers who were thereafter elected as follows:—**EXECUTIVE COMMITTEE:** Messrs. A. D. Hall (chairman), Geo. Gordon (vice-chairman), E. Beckett, Lewis Castle, A. Dean, H. Dunstan, Dr. Masters, Prof. Percival, and — Foster. The superintendents of trial stations who collectively form the **TRIALS COMMITTEE** are: Messrs. Berry (Northumberland), R. Cock (Staffs.), A. Dean (Surrey), H. Dunkin (Warwick), H. Ettle (Somerset), Goring (Sussex), Howman (Glos.), S. Heaton (Oxford), D. Houston (Dublin), Illot (Cornwall), Mann (Bucks), Neald (Cheshire), Redding (Yorks), J. B. Riding (Essex), T. Sharp (Wilts), Smith (Midland Agricultural Institute), J. Udale (Droitwich), Walkley (Chelmsford), J. Weathers (Middlesex), J. Wright (Surrey); also Mr. Newsom and the Cambridge Hort. C.C. Instructor.

Newport (Mon.) Gardeners'.

The usual meeting of the above association was held on Wednesday evening last, when Mr. T. H. Jarvis read a paper on "The Duties of a Qualified Gardener." In the first part of his paper, which was of a very humorous character, Mr. Jarvis gave what he considered to be the necessary duties of a thoroughly qualified gardener, these duties extending over a very wide range. He then proceeded to give what gardeners, especially in single-handed places, were often expected to do, causing much amusement to those present. A spirited discussion followed, in which Messrs. Harris, Jones, Powell, Woodward, Duff, Pegler, Wiggins, Daniels, Basham, Dodds, and Preece took part. Mr. Jarvis was accorded a very hearty vote of thanks for his very entertaining paper. Mr. J. Duff was awarded the society's certificate of merit for six *Alba plena* Primulas, which were splendidly grown and flowered. Mr. Duff presided over a good attendance.

Hull: Essay on Hippeastrums.

At a meeting of the Hull and District Horticultural Association on Tuesday, December 15, with Mr. Tattersall in the chair, an essay on *Amaryllis* (Hippeastrums) was read by Mr. J. Donoghue, of Bardon Hill, Headingley, Leeds. The essayist dwelt on the popularity and possibilities of this gorgeous bulbous plant, traced its history, and explained that although gardeners clung with grim tenacity to the more euphonious name of *Amaryllis*, it was nevertheless botanically inaccurate. Authoritative extracts were read to substantiate this.

The varieties existing about the beginning of last century were recapitulated, and from thence was shown the pedigree or origin of the many different forms now grown amongst us. Coming into a more familiar sphere, Mr. Donoghue ably detailed the culture from the seedling or offset to the flowering of the

bulb in the third year. Seedlings, he contended, were more robust (chiefly owing to the infusion of fresh blood) than were offsets. Thin sowing, gentle heat, even atmosphere, constant plunging, prudent manipulation of syringe, and in the early stages entire absence of the water pot, comprise briefly the advice given for the first year's treatment.

The essayist also commended gradual drying off and repotting just before the commencement of root action. If flowers developed during the second year, it was at the expense of the vigour and constitution of the bulb.

The discussion was joined in by Messrs. Tattersall, Pickers, Wilson, Posthill, Lawton, and Horsfield, each of whom expended words of praise on both the essayist and the essay. —W. R.

National Fruit Growers' Federation.

The position of the Federation continues to improve steadily. The increase of its membership, though not so rapid as might be wished, is constantly going on, especially in Kent, which county is now its stronghold. The Council have been lately engaged in work of a more useful than ornamental or sensational character. For instance, the new disease which has appeared amongst Potatoes has been carefully inquired into, and efforts are being made to induce the Board of Agriculture to take steps to prevent it from spreading. A most instructive paper was read by Mr. W. Horne, of Cliffe, near Rochester, on the Codlin moth, and an interesting discussion took place at a subsequent meeting upon it. Such questions as the danger to public health from the use of vegetables grown on sewage farms, and the increase of assessment to local rates and income tax on the ground of farm land being planted with fruit, are now also occupying the careful attention of the Council.

* * Reports of a number of societies' meetings are unavoidably held over.

Meteorological Observations at Chiswick.

Taken in the Royal Horticultural Society's Gardens at Chiswick, height above sea level 24 feet.

Date.	Direction of Wind.	Temperature of the Air.				Rain.	Temperature of the Soil. At 9 A.M.			Lowest Temperature on Grass.
		At 9 A.M.		Day.	Night		At 1-ft. deep.	At 2-ft. deep.	At 4-ft. deep.	
		Dry Bulb.	Wet Bulb.	Highest.	Lowest.					
December.										
Sunday ...20	E.S.E.	deg. 37.5	deg. 36.8	deg. 40.6	deg. 37.3	Ins. —	deg. 42.8	deg. 44.7	deg. 47.1	deg. 36.8
Monday ...21	N.E.	39.7	39.4	49.3	37.0	—	42.7	44.7	47.1	30.3
Tuesday...22	S.S.E.	48.5	47.0	49.9	39.5	—	43.4	44.8	47.1	39.8
Wed'sday 23	E.S.E.	42.5	41.6	43.5	42.5	—	44.2	45.0	47.1	37.5
Thursday 24	E.S.E.	39.7	38.9	40.3	36.5	—	43.4	45.2	47.1	36.7
Friday ...25	N.W.	38.3	37.2	40.9	36.4	—	42.7	45.0	47.1	29.5
Saturday 26	E.S.E.	36.7	35.8	40.5	36.5	—	42.3	45.0	47.1	31.4
MEANS ...		40.4	39.5	43.6	38.0	Total. —	43.1	44.9	47.1	34.6

The weather has again been dull and very dark.

Young Gardeners' Domain.

An Old Boy's Greeting.

From a literary point of view it is bad taste to address readers personally. From my own point of view I would, as we all step together over the threshold into the unknown of another year, voice a cheery word through the pages of "our Journal" to each and all in Bothydom. Even to us—old heads—comes a freshness and hopefulness as we reach another milestone on life's journey, which, possibly we are not justified in feeling when looking back at the many which stretch away behind—away into the dim perspective of our own dear old bothy days. To you, young brothers of the craft, who have not the prerogative of a past, it is all that it is to us and more also, being infinitely more important, for, as George Eliot says, it makes a considerable difference whether one has half a century before them or behind them. Hence would I at this opportune time give you an encouraging word to fight on manfully, perseveringly, yet consistently, to the end of winning good positions in the gardening world, and that these earlier new years of life may be for you, when looking back at some future time, what Thackeray called The Happy, The Bright, The Unforgotten.

Much has changed in the gardening world generally, and in the bothy particularly, since I bade farewell to the latter one autumn morning many years ago; but much has not changed, nor will change while human nature exists. There is the same diversity of character in Bothydom as of yore; ranging from the happy-go-lucky boy whose high, infectious spirits bespeak a gardener's life as the jolliest one imaginable, down to the dull, listless lad who lolls away his leisure as a thing to be rid of instead of seized upon as a precious possession. The one can neither descend nor the other rise to the stern realities of life. Such extremes exist, but are, happily, exceptional, and the bulk of our raw material in Bothydom is sound, healthy, and promising. Alas! That there should ever be that great gulf, or any gulf, we sometimes see 'twixt promise and performance in the manufactured article; hence I regard bothy life as a critical period, for "no plainer truth appears, our most important are our earliest years." It was not my intention, however, to generalise, or to moralise; rather would I at this season, and seasonable time, briefly supplement that advice I have previously been privileged to give in these pages, by expressing a sympathetic thought for the welfare of my young brothers.

Taking it for granted that plan drawing, high-class reading, and what not, are, during the long nights of winter being carried out and on bravely in the earnest endeavour to make this self-tuition a sound and solid factor in future success, I would ask you are you doing all this methodically and upon a clear and well-defined plan? If not, may I impress the desirability of this matter receiving the consideration it deserves? *Pereunt et imputantur*, says an old sun-dial, or in our tongue, "They perish and are forgotten." One of the illusions of bothy life is that time in it appears so long; whereas, in reality, it is so short. In spite of the many advantages present day pupils possess, and the helps they have, the peculiarity of a gardener's education still remains, leaving him, practically, a self-taught man. The working duty exacted from a youth by his master may be scrupulously performed, whilst his duty to himself is wholly neglected, or carried on in such a desultory manner as to be not only valueless but actually antagonistic to the mechanical training which goes hand in hand with the daily routine.

Do you, young friend, realise the power that is within you, and the possibilities within your reach? If so, you are probably mapping out your course, and it is a good time, this, for making plans, if not already made, apart from those plans of flower beds or buildings you may be busy at—plans which if truly drawn on a conscientious scale, will prove to be a reliable chart of life. It is, of course, the season at which crops of plans are sown as thickly as mustard and cress, and the bulk of them are as short lived, hence they should be simple, sound and few. "Singleness of purpose often accomplishes more than a plurality of talent." Whilst impressing the importance of these matters, and without going into details which you are well able to supply—whilst impressing the importance of your seizing the flying moments in Bothydom to equip yourselves for the battle of a gardener's life—I would that you should try to fit as well as fill the position; so elevate yourselves as to be, or become, gentlemen in the true sense of the word, and for which the refining influence of gardening should do much, and your higher aspirations, if quickened towards an ideal life, the remainder. The bothy, unfortunately, is not congenial to the cultivation of correct conversation or address, nor is it a court of etiquette and polite manners, yet this educational refinement is, possibly, more essential to gardeners in after life than to any other class of men in the world of work. "Virtue, itself, offends when coupled with forbidding manners." The old school of gardeners is dying out, and we can ill afford to lose the courtly, polished, gentlemanly man who, as well as being a sound, practical gardener, was an ornament to his profession. This is, possibly, more or less clear to you, for amongst even young gardeners the bank balance is not always regarded as the barometer of human worth.

The last remark brings up a point not previously emphasised, I think, in any of our *Journal* chats, and I hope I do not stultify myself in pointing to the need of economising not only your time, but your money. The invaluable facilities for saving afforded by the Post Office Savings Bank need no encomiums from me, but I regret that so few of our young gardeners avail themselves of the splendid opportunity it affords for accumulating any spare shillings. A grand time this for starting a little account with His Majesty. In fact, the birth of a new year and the death of an irredeemable old one is admirably adapted for many things, and capable of many things; which, of course, is but a truism, but for you, if you will it, it should be a happy new year. Aye! A Happy New Year; no mere stereotyped phrase, passing compliment, or empty sound, but fraught with all the deep significance and inherent potentiality it is capable of bearing. Such may it be to each, and to all of you, in Bothydom.

THE BEE-KEEPER.

The Stewarton Hive.

This hive derives its name from the town of Stewarton in the north of Ayrshire. Its origin is rather obscure, but it is supposed to have been invented about the year 1819 by Robert Kerr, a cabinet maker of that town, and familiarly known as "Bee Robin." Its merits have ready championship amongst Scotsmen, particularly in the South of Scotland, where there have always been some remarkably clever bee-keepers. The hive, of which there have been many modifications, is octagonal in shape, which is considered the nearest approach to the circular and natural form in which the bees cluster, and is made up of from one to three body boxes, or brood chambers, 14in wide inside measurement, and either 7in or 9in deep, having eight bars, the six centre ones being 1½in wide for brood production, and the two outside ones 1½in wide, in which the honey is stored. The bars are fastened in the hive by half-inch screws, which may be removed if it is desired to render the bars moveable. Foundation is, of course, fitted to the centre of each bar as with the ordinary bar-frame, but when the comb is completed it is thicker.

The boxes, which are very accurately constructed, fit exactly upon each other, and are fitted with a window and a moveable shutter at the back and front, so that it can be easily ascertained how the work of comb building, &c., is progressing. Generally three entrances, 3½in wide and ½in deep, are fitted in the bottom of the body boxes, which have slides for contracting or closing them altogether. In a prosperous hive, when the weather is warm, these entrances are not considered too much for ventilation and for the traffic of the bees. In addition to the numerous body boxes there are supers of corresponding width, but only 4in deep, furnished with seven bars 1½in broad.

One of the disadvantages of this hive is that its cost is considerably increased by an extra covering, which is absolutely necessary for it. This outer casing should be about 20in square, plinthed all around so that each lift fits on the lower one, and they should be capable of tiering in order to expand and contract in an exactly similar manner to the "W.B.C." method. The floor board is made to fit the outer casing, and is extended in the three positions necessary for entrances, which are sloped so that the rain will run off. The roof also is octagonal in shape, sloping and overhanging all round. The combs in the Stewarton hive are made moveable by dispensing with the screws, but are only interchangeable in similar positions in the different boxes. The general method of feeding is by a trough fitted in the floor board of the hive.

Before packing for the winter all the wooden slides in the tops of the supers have to be withdrawn, and the whole of the top is then covered with a piece of carpet, ticking, or other warm material, except woollen fabrics, with an aperture cut in near the centre, and over this three or four thicknesses of warm quilting are placed. Queen excluder is not used with this hive, the bees being admitted to the supers by withdrawing the outside slides. The extra thickness of the combs, the shallowness of the supers, and the depths of the cells of the drawn out bars, all have a tendency to deter the queen from using the supers as brood boxes, but very much in this respect depends upon the neighbourhood and the season. The additional empty supers are placed on the top of those which are partly filled, but more breeding room can be given below, which is an advantage in the management of this hive, as the heated air ascending from the bees working below obviates any possibility of the brood chilling.—E. E., Sandbach.

"The Life of the Flower."

One of the pleasantest features of the periodical literature of our time is the number of attempts to bring the mysteries of science and the beauties of the life around us home to the minds of those busy people who read newspapers and magazines, but who have neither the time nor the inclination to study formal treatises upon subjects not directly connected with their own work. More particularly has this been the case with Natural History, in which an interest has been excited which would have seemed incredible to White of Selborne. If Richard Jefferies were alive to-day his exquisite work, instead of a cold reception by an unappreciative world, would be eagerly sought by editors, and devoured by an enthusiastic public. Undoubtedly the change is largely due to an enlightenment which has been brought about by the Press, which has not only summarised in various attractive forms the conclusions reached by patient investigators, but has spared neither money nor pains to procure original work from writers, the fascination of whose style charms even the most careless into an interest in birds and beasts and flowers, which they had never suspected they possessed.



Fruit Forcing.

VINES: EARLIEST FORCED IN POTS.—The canes that were started in November will now have the root action excited by the development of the foliage. Great care is necessary at this stage to avoid ehills, such as those resulting from cold currents of air and watering with cold water or liquid manure. The temperature about the pots should be kept steady at 70deg to 75deg, pressing down the fermenting materials, adding fresh, but sweetened, as required, it being good practice to keep a heap of leaves and stable litter in reserve, from which the supply may be drawn as needed. Disbud and tie down before the shoots touch the glass, not being in too great a hurry in stopping. When two leaves are made beyond the bunch pinch off at that point, the laterals being stopped to one leaf as made. Superfluous bunches should be removed as soon as choice can be made of the best, leaving those for the crop that promise to be the best shaped and most compact. It is better to have the Vines under rather than over-cropped. The night temperature should be maintained at 60deg to 65deg, and 70deg to 75deg by day, with an advance of 5deg, 10deg, or 15deg from sun heat, according to circumstances. When the flowers open keep the temperature 70deg to 75deg regularly, and maintain a rather dry but not arid atmosphere, and when the fruit is set return to the temperature previously named. Supply liquid manure copiously when the fruit commences swelling; yet it must only be given when the soil is moderately dry, as excessive supplies cause soddenness and lead to shanking and bad finish. Maintain a moist, genial atmosphere by damping the paths and walls two or three times a day, and occasionally with liquid manure, not too strong, or the ammonia volatilised may prove injurious instead of beneficial to the Vines.

PLANTED-OUT VINES STARTED IN NOVEMBER require similar treatment to Vines in pots, but the bearing shoots may be stopped three or four joints beyond the fruit, and then extend the growth so as to secure as much well-developed foliage all over the house as can have full exposure to light, taking care to avoid overcrowding.

HOUSES FROM WHICH THE GRAPES HAVE BEEN CUT.—Pruning should be completed without delay, cutting to a round bud as near the stem as consistent with promise of a crop. Shorten or cut away elongated spurs where there are others nearer the stem to supply fruit, or train up young canes to displace them. Remove loose bark carefully, not scraping into the quick or live bark, and thoroughly cleanse the house, washing the Vines with a solution of carbolic or petroleum soap (4oz to a gallon of water), or some other approved insecticide, at winter-dressing strength, employing a brush and reaching into every angle, hole, and crevice. Avoid strong soapy solutions, as they ultimately dry the bark and cause the Vines to break weakly. Remove the loose surface soil, especially near the collar of the Vines, and supply fresh loam, with about one-third of decayed stable or farmyard manure. Loam seems to favour root action, and it holds the other fertilising substances, so that the roots find abundance of nourishment when proper supplies of water are given during active growth. The house should be kept cool, but frost is best excluded. If used for plants the temperature ought not to exceed 40deg to 45deg by artificial means, and those plants only that require safety from frost should be placed in vineries when the Vines are at rest. If the house has a mean temperature of 50deg the buds will be started, and that is prejudicial to the after growth, as alternating excitements and retardments more or less affect the constitutional energy of the Vines.

LATE HOUSES.—Muscat of Alexandria and Canon Hall Muscat are extremely difficult to keep on the Vines after Christmas, which may be due to the fluctuations of temperature and variability of the atmospheric moisture, the principal difficulties being to keep the temperature even and prevent the deposition of moisture on the berries. Some growers prefer to let the Grapes remain on the Vines. To keep the temperature equable and exclude fogs and damps, cover the roof lights with straw mats or similar material, keeping the house freely ventilated in mild weather, and close when cold, with little more heat than is necessary to exclude frost. Grapes so kept weigh heavier than those that hang some time in a drier and warmer atmosphere, and Muscat so preserved command high prices, but the Grapes do not always keep well.

FOR GENERAL PURPOSES Grapes are best kept after the new year in a Grape room, cool, dry, and as equable in tem-

perature as possible, and the more wood they are cut with the better they will keep. Place a lump of charcoal in each bottle before the end of the shoot is inserted in the rain water, provided the temperature is kept equable, or as near as may be 40deg to 45deg. By cutting and bottling the Grapes the Vines are set free for pruning and cleansing the house. Alicante, Gros Colman, and Lady Downe's succeed well under the close pruning system, spurring to one or two buds, the bearing shoots being stout and short-jointed; but Gros Guillaume and Mrs. Pineo do best on the long pruning system, cutting the shoots to a plump bud on well-ripened wood, as the small basal buds are seldom reliable, often pushing fruitless shoots.

Muscat of Alexandria and Canon Hall Muscat also succeed best on the extension system, but sturdy, short-jointed, well-ripened, and not overcropped shoots of these varieties generally show enough fruit when pruned to two buds, though when the buds are small and the growths weak or long-jointed it is better to shorten to the shoots to the first plump bud from the base, always taking care to rely on those on well-ripened wood. Where the Grapes cannot be cut for some time the mean temperature should be maintained at 45deg, 5deg less as a minimum and 5deg more as a maximum, admitting air constantly in mild weather, but keeping close when foggy and cold, then with a gentle warmth in the pipes to ensure the air moving. This is the grand secret, as stagnation causes the exact condition under which micro-organisms germinate and thrive, they speedily reducing Grapes to a decaying mass and common level.—G. A., St. Albans.

Kitchen Garden.

TRENCHING GROUND.—Vaeant portions of the kitchen garden should receive good winter cultivation by breaking up the soil to a good depth, and, in doing so, not only including the top spit, but the spit below and the subsoil as well. Moving soil to the depth mentioned is always beneficial, but the manner of doing it is of rather more importance than may at first sight appear. It is generally found that the top spit is of a more fertile character than the lower; therefore, when this is the case, the relative positions of the various spits should not be changed. This is easily done by the process of bastard trenching carried out as follows:—Take out a trench 2ft wide and two spits deep, half way across one end of the plot to be trenched, and wheel to the same end of the other half. Next cut another trench the same width, and take out the first spit, placing it with the other soil removed. The bottom spit of the first trench should then be broken up and left where it is, and the second spit of the second trench should be placed on the top, finishing with the first spit of the next trench. Continue in this manner, adding manure between the bottom and second spit. By this method fertile soil remains on the surface while the material below is broken up and begins to improve in quality, until in time the whole depth will be of uniform fertility.

PREPARING HOTBED MATERIAL.—Hotbeds will shortly be required for various purposes; hence the preparation of material for forming them ought to be commenced. Dry or moderately dry Beech and Oak leaves are admirably suited for mixing with fresh horse manure. Until a quantity both of manure and leaves can be brought together they should not be encouraged to ferment, but be spread out thinly; then, when enough has been secured, throw into a heap to ferment, turning over several times to drive out the fierce heat and strong gases evolved. After this it will be ready to form into beds, preferably within brick frames, as this will to a great extent conserve the heat. Open beds, however, built up with a frame on the top have the important advantage that they can have the heat renewed from time to time by linings on the outside of fresh material.

POTATOES.—If kept thoroughly dry and cool in the store room or shed, and protected during frosty periods, little harm will come to the tubers. Damage to the tubers spreads very rapidly when damp conditions prevail about them, or disease-infected tubers are allowed to remain among sound specimens. Seeing that there is the possibility of this occurring if the Potatoes were in the least affected when stored, it is desirable to make an examination of them at this time, and separate sound from unsound tubers. While doing this the tubers most suitable for seed may be selected, placing them in shallow boxes and store in a light position. Potatoes for cooking must be kept from the light. Good, clean, dry straw or bags may be used as a covering, increasing the depth in the event of severe frost.

LIFTING ROOT CROPS FOR USE.—Although many roots, including Parsnips, Jerusalem Artichokes, Salsafy, and Horseradish, are left in the ground as a rule until wanted, and there keep in good condition, it is desirable to lift a portion of each crop and lay in in soil in a shed, so as to be readily at hand during severe weather.

PLANTING HORSERADISH.—The opportunity may be taken, if a plot of deeply dug ground is prepared, to replant a

bed of Horseradish. Roots nine inches to a foot in length and about the thickness of the little finger, each with a crown, may be selected. Rub off the side rootlets to within an inch of base. Plant a foot apart in rows two feet asunder, burying the crowns just below the surface. If not convenient to plant now, suitable roots may be selected and laid in moist soil or sand; also prepare the ground for their reception, deep digging being essential, working manure into the bottom spit of soil only. —EAST KENT.



* * All correspondence relating to editorial matters should be directed to "THE EDITOR," 12, MITRE COURT CHAMBERS, FLEET STREET, LONDON, E.C. It is requested that no one will write privately to any of our correspondents, seeking information on matters discussed in this Journal, as doing so subjects them to unjustifiable trouble and expense. In naming plants we only undertake to name species, or well-marked varieties, and only six on any one occasion. Florists' flowers we do not name.

VARIOUS (Alph).—Your queries will receive attention in our next issue.

DOUBLE BEGONIAS (E. J.).—We cannot tell whether they are whites or not. Wait until they flower.

CERTIFICATES FOR PLANTS (T. S.).—If you carefully explain your requirements to a local job-printing firm you ought to be able to get what you want.

NATIONAL FRUIT GROWERS' FEDERATION.—We are informed by Mr. A. T. Matthews, secretary to the above, that his address is now 6, Fairlawn Grove, Chiswick.

MUSHROOM BEDS ON THE BORDERS OF TOMATO HOUSES (T. T., Markets).—Beds made up in October, after the Tomato plants have been cleared out, will commence bearing in from a month to six weeks after spawning and earthing, and they will continue to bear for about a similar period. The beds should be made on the border of the house, not taking out dry soil for the making of the Mushroom beds. After the beds are spawned and earthed, a light covering of soft straw is advisable in order to maintain uniformity of heat and moisture in the beds, but it is not desirable to employ a thick covering in the case of beds where a suitable temperature can be maintained. This for Mushrooms is 55deg to 60deg. The time for inserting the spawn is when the heat of the bed is decreasing but has not fallen below 80deg, inserting the spawn an inch below the surface. The Mushrooms are packed in punnets, three different sizes being employed, namely, for "buttons," 5in in diameter and 3½in deep, and known as "deep pounds"; for "cups," 6½in in diameter and 2in deep, known as "flat pounds"; and for "broilers," 5½in across and 1in deep, sold as halves. "Buttons" are Mushrooms that have the cap of the pileus united to the stalk, and the laminae or gills not visible. "Cups" are a step advanced in development, the membranous covering with the stem being broken, but not showing more than a ring of the laminae, half an inch in diameter. "Broilers" are Mushrooms fully expanded, of the form of an inverted tea saucer, and showing the gills clearly.

The Mushrooms, carefully gathered and the stems divested of any loose particles of soil or manure, are weighed into pounds and placed in the punnets with the best samples on top and forming a regular surface, neatly papered and secured with wrapper. The punnets are packed in light yet sufficiently strong boxes, and of convenient size to hold the number of punnets. A box 3ft 2in long, 1ft 11in wide, and 1ft 4in deep, a 1in batten being nailed across the inside of each end 8in from the bottom for supporting a floor or shelf after the bottom of the box has been occupied with punnets, accommodates fifty-six to sixty punnets; and a little clean hay being used to make all firm, a few strips of deal tacked across for protection, the produce may be sent any reasonable distance without fear of injury.

In gathering the Mushrooms they are twisted off, leaving no part of the stem in the bed, and they are packed with their stems entire, just as gathered from the beds, minus the soil that is drawn out with the roots, and which is shaken off as the pulling proceeds, the stumps (if any) of the cluster that snap off close to the surface being scooped out with a knife and, of course, discarded. As to watering, it is important that the soil never be permitted to become dry, and water must be given as often as is necessary in sufficient quantity to prevent this.

In the case of covered beds the water must be sprinkled on the straw—not under it—in sufficient quantity to percolate

through it and gradually moisten the soil; and immediately after watering the beds they should be covered with mats to prevent the moisture evaporating. In case of the Tomato houses not being heated there will be little difference as compared with outdoor beds. These should be about 2½ft wide at the base, about 6in wide at the top, and 2½ft wide. The covering for beds made up in October will need to be thickened in cold weather, so as to exclude frost and maintain at the surface of the bed a temperature of about 50deg. If the weather be mild and the bed comparatively new, a covering of bunches of litter will suffice, while during severe and prolonged frost 2ft or more in depth of straw, protected with mats, will be necessary.

To answer your questions fully would require several numbers of the *Journal of Horticulture*; therefore we advise you to procure "Mushrooms for the Million," or the series of handbooks on vegetables for profit: No. 1, Green Crops; No. 2, Root Crops; No. 3, Asparagus, Peas, Beans, &c.; and No. 4, Mushrooms, Cucumbers, &c.; price 1s. each; published at 148 and 149, Aldersgate Street, London.

NAMES OF PLANTS.—Correspondents whose queries are unanswered in the present issue are respectfully requested to consult the following number. (Surrey).—1, *Nephrolepis molle*; 2, *Lomaria nuda*; 3, *Cyrtomium Fortunei*; 4, *Adiantum cuneatum* var.; 5, *Adiantum cuneatum*. (J. T.).—Strawberry Tree (*Arbutus Unedo*). (A. F.).—1, *Maranta zebrina*; 2, *Tradescantia procumbens*.

Trade Notes.

Messrs. Hugh Low and Co., Royal Nurseries, Enfield, write: "We have to notify you that Mr. Cornelius Barnard, who has been with us for a great many years and recently employed as wholesale traveller, is leaving our service at Christmas. We are anxious that it be understood that it is *Cornelius* who leaves our service, and not Mr. H. A. Barnard, who is so well known throughout the country."

W. J. Godfrey, Exmouth Nurseries, Exmouth, sends a full-size photographic reproduction of the new Japanese Chrysanthemum, Lady Cranston. Messrs. Wells and Co., Limited, Earlswood, Redhill, also send their usual sheet of Chrysanthemum novelties, illustrated by half-tone reproductions.

Trade Catalogues Received.

R. H. Bath, Ltd., The Floral Farms, Wisbech.—*Seeds, Paeonies, Carnations, Roses.*

Frank Dicks and Co., 68, Deansgate, Manchester.—*Seeds, Gladioli, Liliums, &c.*

Dickson and Robinson, Manchester.—*Seeds.*

Dobbie and Co., Rothesay.—*Spring Catalogue, 1904.*

Little and Ballantyne, The King's Seedsmen, Carlisle.—*Seeds.*

Wells and Co., Ltd., Earlswood, Redhill, Surrey.—*List of New Chrysanthemums.*

B. S. Williams and Son, Upper Holloway, London, N.—*Seeds.*



Vale !

The year is dying in the night,
Ring out wild bells and let him die.

The year is going, let him go.
Ring out the false, ring in the true.

Times and seasons! Days, months, and years tear past us as though harnessed to the horses of the sun! We stand at the threshold of another year. What it brings we know not—weal or woe. We know partially of the past; we realise the present; the future is hidden in dim obscurity. It is well to pause in this our feverish headlong life; to

pause and consider where we stand; like prudent men, to make up our books and face our position. We take so little time to think; we ever hurry to and fro and wear ourselves out before our time with ceaseless toil and restless worry.

Perhaps our readers will be inclined to say that of all vocations that of a farmer is the most tranquil, the most peaceful. It ought to be. There is the close intimacy with Nature in her ever varying moods, and that should soothe petty anxieties and smooth rough ways; but Nature is sometimes more like our idea of a stern stepmother—one who never shows a smiling face to the children of her adoption. This past year has been one of much vicissitude; the days of storm have been so out of proportion to the days of sunshine. Jupiter Pluvius has been in the ascendant. We have hoped that every change of the season would bring more favourable weather; and, indeed, we may bless the days of December as being on the whole far better, pleasanter days than those of many of the preceding months. Just think of that; better December weather than late summer or autumn! There was such promise in the spring of prosperity; but we have learned to distrust mild springs—sooner or later comes the severe check. If it would only come soon it would be beneficial. Plant life is prematurely forced only to be checked beyond hope of recovery.

In the southern provinces the hay crop was a good one, and well got. Further north the crop was again good, but here we pause; it was not got in good condition; and, indeed, a great deal was never got at all—at least in the form of hay. It might be carted into the yards to be trodden under foot, but that was all. It makes an amazing difference; indeed, all the difference the way the crop is secured. Grain crops promised heavy, good crops of Wheat, only grown apparently to be the sport of wind and weather. Storm-tossed, broken, discoloured, difficult to reap, difficult to “condition,” and more difficult to market; nay, almost impossible. We do not take up a farming paper without seeing numerous queries as to how to deal with this damp, spoiled grain. Damaged Wheat is the least suitable of cereals for stock feeding; it is particularly the food of man. For animals it must be used sparingly and carefully. In a ground state it is the safest; but even when ground it is wisest to keep it out of the stable. There is such a desire to use Wheat as a substitute for Oats; a practice of this kind is fatal. If given at all it must be in very small quantities, which should be bruised and given in chaff. Whether wheatmeal is desirable for milk cows is a much debated point. Some great authorities urge its use. Others quite as great would relegate to the fattening steer. One writer, however, would allow 3lbs per head per diem of ground Wheat for milk cows if mixed with chopped straw and boiling water. It may constitute also part of the dry feed for sheep, and as a finishing fatterer for pigs it has no equal.

But as this year there is other spoiled corn as well as Wheat, there is no reason why a mixture should not be made; say equal parts of Wheat, Barley, and Oats—this passed through a mill will make excellent feed, and safe into the bargain, and at the same time will materially lessen the expensive cake bill. It is a most extraordinary thing that with all this spoiled corn and tons and tons upon tons of damaged Potatoes pigs are comparatively cheap. Judging from past experience they should have been dear as mint; but these are things no “fellah can understand.” There is one thing we would recommend, and this is only for young farmers. Give your damp grain a chance to dry and “condition” in the stack; it is marvellous what a change may be wrought by three or four months sojourn in stack. Sometimes it is possible, too, to kiln dry damp corn. And also if you can make anything over 24s. per quarter for Wheat let it go. What a fallacious thing returns are! Here we are told by Lord Onslow that the returns this year showed improvement over the last ten years. “Quantity” rather than “quality,” he adds, Oats, Beans, Peas, and Mangold being above the average. Wheat, Barley, Potatoes, Turnips, and Swedes below. Grass crops, especially hay, much above. A writer analysing the reports speaks very dolefully of all. There is no grain to be recorded; it is simply how little loss, and he puts the loss thus:—“In 1902 the value of all the field crops grown in Great Britain on 16,682,780 acres was about £101,200,000; the value in 1903 with a larger acreage is only about £80,500,000, being a reduction of about £20,700,000, or 25s.

per acre, nearly 21 per cent. This is just for ordinary farm crops; not a word is said about the entire failure of the fruit farmers. It is greatly to be feared also that the fat stock sales have been the occasion of much disappointment. The animals in tiptop condition have certainly not realised their value. We hear on all sides rumours of changes in tenancy, and we feel sure the New Year will find many poor farmers at their wits’ end to make ends meet and to satisfy all lawful demands on their depleted purses.

The only animal that seems never to be a drug in the market is the cow in full milk; she is always bad to find, and therefore always dear, and the problem seems to be how to keep up her milk supply when you have got her. We saw a theory to-day, and one that sounds very reasonable, and it is this; that the milk yield of cows may be and is very much affected by change of residence. A cow is a nervous animal, and as readily falls and rises in her milk estimate as the mercury in the barometer. She is some time getting accustomed to her new surroundings, to her new attendants, and to her new rations, which are never exactly alike in two places. Besides also, for all the buyer knows, she may have been so heavily and continuously milked, almost round to calving, that her constitution needs a certain period of rest. We wish we could impress upon all our readers the desirability of breeding from none but good milking strains and then dedicating all heifers to dairy purposes. There is far too much waste that arises from the breeding of what we may for want of a better word, style “misfits,” neither good for beef or dairy purposes.

We wonder how much nearer we shall be next Christmas to universal motor power. Whether it will come with a rush or whether the slowgoing farmer will be plodding on much as usual. We can but hope for brighter, better days—more sunshine and less rain—for surely now all springs must be so replenished that there can be no fear of a water famine! It is well that a merciful Providence hides the future behind a thick veil; the thought of coming ills will daunt the stoutest heart, and the hope of a better future goes far to raise downcast spirits. Whatever may be in store for us collectively or individually, it is the brave, hard worker who comes out best in the long run.

To all our kindly readers we would tender our grateful thanks, and with all our heart we wish them and theirs the happiest and most prosperous New Year they have ever seen.

Work on the Home Farm.

Ploughing is still the chief work, belated though much of it, no doubt, may be. Still, we are glad to get the work done under such good conditions for December, and considering the unusual weather we have recently experienced.

We have been sorting and sending away Potatoes, and it is such a difficult matter to make a good sound sample that the work is very expensive of labour. The ware produced costs just twice as much as usual in the sorting process—offals, which amount to about 50 per cent., being, of course, not reckoned.

We have been delivering these Potatoes to the station, and although railway business is supposed to be slack we find great difficulty in obtaining empty waggons; but that is an old complaint. It is somewhat strange to remark it, but work on the land is now easier than it is on the roads. The latter had become very soft through the continuous wet, and the slight frosts have left the surface very much like hasty pudding. Arable land has dried in a marvellous way, and unless we have a wet January there is every prospect that we shall soon commence spring cleaning. Some farmers are hoping for a severe and long frost as the best pulveriser of the sodden soil, but we should like to have all ploughed up before it sets in.

There is always difficulty nowadays in obtaining suitable wood for fencing purposes at a price commensurate with the depth of the farmer's pocket; and the most difficult article to obtain is a good cheap stake. Estates which include large areas of timber provide plenty of stakes, but they are often of a trashy character and cut with a view to satisfy the tenants' outcry rather than a useful purpose. Good ash stakes are useful and easy to work with. They are also easily got ready, but are not nearly as lasting as their appearance would suggest. Larch tops take some labour in trimming and are rougher in appearance, but they wear better. Cheap timber from the seaports may often be obtained, but a large portion is of little use except as firewood, which is not usually a scarce article on the farm.

Cakes, both linseed and cotton, are lower, in sympathy with the depression in grain, and it is a moot question with farmers, whether to buy cake or use barley. We would sell barley at anything over 20s. per quarter, but consume it at that price or less. Every animal on the farm will thrive on barley in some proportion.

